RELEASE NOTES

EMC® NetWorker®
Release 8.0 and Service Packs

Release Notes

P/N 300-013-567
REV 10

June 21, 2013

These release notes contain supplemental information about the EMC NetWorker 8.0, 8.0 SP1 and 8.0 SP2 releases.

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The installed NetWorker version displays as a four digit number. For example, the initial release of NetWorker 8.0 SP2 displays as NetWorker 8.0.2.0 when installed.

NOTICE

All new or updated software downloads and product-specific technical documentation are available on the EMC Online Support site at support.emc.com. From the Support by Product pages, search for NetWorker using "Find a Product." The product page provides access to all product specific downloads and documentation, as well as additional content and tools.

Revision history

The EMC® NetWorker® 8.0 release notes was originally published in June, 2012. Table 1 on page 2 presents the revision history of this document.

Table 1 Revision history

Date	Description
June 21, 2013	• Updated for the GA of NetWorker 8.0 SP2
May 14, 2013	• Added advisory information for ETA esg135000, "Microsoft VSS backups may contain inconsistent data that cannot be restored due to a Microsoft-reported issue in the Windows Volume Shadow Copy framework" on page 36
February 26, 2013	• Added advisory information for ETA esg133843, "NMM Exchange FULL save sets change to recoverable while dependent incrementals are still browseable" on page 36
January 30, 2012	• Updated for the GA of NetWorker 8.0 SP1
January 3, 2013	• Added information for "NetWorker remote code execution vulnerabilities" on page 39
December 18, 2012	• Updated section "Fixed problems" on page 24
December 14, 2012	• Updated for the NetWorker 8.0 SP1 release
July 27, 2012	• Added to new features and changes, "VSS:*=OFF option to completely disable VSS" on page 22 • Added note to "Multi-Tenancy Facility option" on page 16 to indicate NMM not supported in restricted data zone. • Added to new features and changes, "New option VSS_ALLOW_DEFAULT_PROVIDER" on page 21 • Added to new features and changes, "Idle Device Timeout default value changed to 10 minutes" on page 22
July 13, 2012	• Added limitation "RECOVER_FROM_REP_HOST variable setting not honored when using nsrconsolidate for rehydration of Avamar deduplicated save sets on replication node" on page 47 • Added limitation "HP ONCPlus package required on HP-UX 11.31 ia64 and HP-UX PA-RISC to perform Data Domain operations" on page 47
July 5, 2012	• Revised information for "Report home" on page 18 • Added information to "Restricting backup and recover access to a NetWorker server" on page 19
June 27, 2012	• NetWorker 8.0 RA release

Product description

The EMC NetWorker 8.0 releases provide significant functional enhancements, including support for the following:

- Backup and recovery of Windows 8 clients and Windows Server 2012 servers, in addition to Windows Bare Metal Recovery support for these systems
- Synthetic full backups, which consolidate the initial full backup with subsequent incremental backups to create a new backup
- Improvements to the NetWorker Management Console, including new functionality, new reports, and more configuration options
- File-level recovery and single pass recovery available from Windows Bare Metal Recovery (BMR) backups
- Automatic configuration of NDMP backups
- Client direct enhancements, including support for DD Boost and standard AFTD devices, and the ability to bypass the NetWorker storage node and send data directly to a Data Domain system

"New features and changes" on page 3 provides more information on new features and identifies the release these features were introduced.

Before installing NetWorker release 8.0, review the NetWorker release 8.0 installation guide, administration guide, and other documentation. "Documentation" on page 212 lists the complete NetWorker release 8.0 documentation set.

New features and changes

NetWorker 8.0 SP2

The NetWorker 8.0 SP2 software does not contain any new features. Table 3 on page 24 provides information on fixes contained in this release.

NetWorker 8.0 SP1

The NetWorker 8.0 SP1 software contains the following new features and enhancements. More detailed information on these features is provided in the *EMC NetWorker Administration Guide*:

- "Support for Windows 8, Windows Server 2012, and UEFI for Windows" on page 4
- "Windows BMR for Windows 8 clients and Windows 2012 server" on page 4
- "VMware enhancements" on page 4
- "Solaris AMD added to Software Distribution wizard support" on page 5
- "NPIV supported for tape device and jukebox" on page 5
- "Avamar 6.1 client support" on page 5
- "LTO-6 tape device support" on page 5

- "LTO device default block size increases to 256 KB" on page 5
- "Auto-configuration of NDMP backups" on page 6

Support for Windows 8, Windows Server 2012, and UEFI for Windows

NetWorker 8.0 SP1 provides Windows System State and File System backup and recovery support for Windows 8 clients, and Windows Server 2012 (including non-optimized backup and recovery for Windows Server 2012 deduplicated volumes), and for UEFI-based systems running Windows.

Optimized backup of data deduplication volumes on Windows Server 2012 is not supported. "Optimized backup of Data Deduplication volumes not supported" on page 37 provides more information.

Changes to browser and JRE requirements for Windows 8 and Windows Server 2012 in NMC

The following browser and JRE version requirements identified in NMC for Windows 8 and Windows Server 2012 can be ignored:

- Firefox version number (17.0.1)
- JRE version 1.8

Windows BMR for Windows 8 clients and Windows 2012 server

Windows Bare Metal Recovery (BMR) is available for Windows 8 and Windows Server 2012 operating systems. This support includes a new Windows Bare Metal Recovery wizard in the NetWorker Management Console.

VMware enhancements

The VMware integration with NetWorker 8.0 SP1 includes the following enhancements.

Support for vSphere 5.1

NetWorker 8.0 SP1 supports vSphere 5.1 as part of the NetWorker integration with VMware. vSphere 5.1 requires the NetWorker 8.0 SP1 or later client on the VADP proxy.

Note: NetWorker 8.0. SP1 ships with VDDK 5.0 build 427917. The *NetWorker Software Compatibility Guide* provides an interoperability matrix containing VADP Proxy, vSphere and ESX version compatibility with the NetWorker server.

Recovery of a VM which already exists in the environment by allowing a name change

In NetWorker releases previous to 8.0 SP1, a recover of the virtual machine fails if the virtual machine already exists in the specified ESX or VC server. If you did not want to delete the original VM, the VM had to be removed from the inventory, and the datastore folders associated with the VM renamed.

This is no longer required in NetWorker 8.0 SP1. A VM that already exists in the environment can be recovered by changing the name of the VM.

VM display name now visible in winworkr during recovery

When performing a VM recovery in winworkr, previously the VM display name did not appear, even if the option to show the VM display name was selected during backup. In NetWorker 8.0 SP1, the display name for the VM to be restored now appears in the winworkr program.

Configuring CBT using the variable VADP_DISABLE_CBT

In NetWorker 8.0 SP1 and later, a new variable **VADP_DISABLE_CBT** allows you to control the enabling or disabling of CBT. The *NetWorker and VMware Integration Guide* provides more information.

Completion attribute removed from NSR group resource

Starting in NetWorker release 8.0, the completion attribute has been removed from the NSR group resource (nsr_group). If the completion attribute information is needed, use the **nsrsgrpcomp** command to obtain it. This will also be true for any scripts that need this information.

Completion details are purged according to the jobsdb retention interval. Your script must execute **nsrsgrpcomp** within the jobsdb retention interval to return completion details.

Solaris AMD added to Software Distribution wizard support

The Solaris AMD architecture has been added to the Server and Client supported list for the Software Distribution wizard.

NPIV supported for tape device and jukebox

NetWorker now supports N_Port ID Virtualization (NPIV). allowing multiple systems to share a single physical Fibre Channel port. This support includes tape devices and jukeboxes, and allows jukeboxes to be configured in an AIX LPAR environment (AIX versions 6.1 and 7.1).

Avamar 6.1 client support

NetWorker 8.0 SP1 supports the Avamar client version 6.1.

LTO-6 tape device support

NetWorker 8.0 SP1 supports the configuration of LTO-6 tape devices.

LTO device default block size increases to 256 KB

In NetWorker 8.0 SP1 and later, the default block size for an LTO device increases from 128 KB to 256 KB. When NetWorker labels a new or used volume in an LTO device and the Device block size attribute of the device is the handler default, then the label operation uses a 256 KB block size. Increasing the default LTO block size results in Data Domain VTL deduplication ratios improving by up to 15%, and physical tape device write speed over higher-latency SAN links improving by an average 30%.

Note: Volumes will not write at the new block size until the volume is labeled with NetWorker 8.0 SP1.

Auto-configuration of NDMP backups

Previously, NDMP backups required manual configuration to offload DSA workload and activities to storage nodes and clients. When not configured appropriately, NDMP data travels to the storage node via the NetWorker server and the NetWorker server must then handle index processing, creating performance issues. Large NDMP index conversion operations need to share the NetWorker server which is typically busy with other backup operations, leading to performance issues.

NetWorker 8.0 SP1 supports auto-configuration of NDMP backups by automating the selection of resources and offloading of the index conversion.

NetWorker 8.0

The NetWorker 8.0 software contains the following new features and enhancements. More detailed information on these features is provided in the *EMC NetWorker Administration Guide*:

- "Optimized disk reading" on page 7
- "Windows Disaster Recovery now Windows Bare Metal Recovery (BMR)" on page 8
- "Device management changes" on page 8
- "NetWorker server in LDAP mode" on page 10
- "Changes to User Group resources" on page 10
- "Audit Logging and Accountability" on page 10
- "Changes to the syslog configuration file" on page 10
- "Strong authentication recommended between NMC Console and NetWorker server" on page 11
- "New storage node attributes in NMC to enable storage node resource" on page 13
- "Clone storage node information now located in Devices tab in NMC" on page 14
- "Stopping a session from NMC" on page 14
- "Multiple resource editing" on page 15
- "Device Access Information attribute in NMC" on page 15
- "Multi-Tenancy Facility option" on page 16
- "New Client Direct attribute to enable DFA in NMC" on page 16
- "Probing and cloning jobs status/completion added to Savegrp reporting" on page 17
- "Synthetic full backups" on page 17
- "NetWorker support for ASR disaster recovery of Windows XP and 2003 clients" on page 18
- "Report home" on page 18
- "License management enhancements" on page 18
- "Automatic volume relabel" on page 18
- "NDMP client configuration enhancements" on page 19

- "Restricting backup and recover access to a NetWorker server" on page 19
- "New savegroup failure notification" on page 19
- "Filtering the savegroup completion report messages" on page 20
- "New file (nsrrc) for NetWorker environment variables" on page 20
- "HomeBase agent no longer included in NetWorker software installation" on page 20
- "Updated version of Sybase SQL Anywhere" on page 20
- "Preference given to read-only devices for recovery" on page 20
- "Ability to rollover the daemon.raw file in real time" on page 20
- "Version of Apache server updated to Apache 2.2.17" on page 21
- "New compression directive (compressasm) supported by NetWorker" on page 21
- "Passwords no longer used in command line arguments" on page 21
- "New option VSS_ALLOW_DEFAULT_PROVIDER" on page 21
- "VSS:*=OFF option to completely disable VSS" on page 22
- "Idle Device Timeout default value changed to 10 minutes" on page 22
- "Persistent device names can now exceed 1024 SCSI devices on Linux" on page 22
- "Support for enabling of SELinux on Linux platforms" on page 22
- "Checkpoint restart backups for NDMP client" on page 22
- "NMM 2.3 not supported with NetWorker 8.0" on page 23
- "NMM client configuration support in NMC Client Configuration wizard" on page 23

Optimized disk reading

NetWorker 8.0 introduces a new feature to optimize data read performance from the client system during standard file system backups.

While NetWorker 7.6 and earlier used fixed 64KB blocks while reading files from a client, NetWorker 8.0 introduces an intelligent algorithm which chooses an optimal block size value in the range of 64 KB and 8 MB based on the current read performance of the client system. This discovery occurs during the actual data transfer and does not add any overhead to the backup process, while potentially significantly increasing disk read performance.

Note: Read block size is not related to device block size used for backup, which remains unchanged.

This feature is transparent to the rest of the backup process and does not require any additional configuration.

You can override dynamic value by setting the environment variable **NSR_READ_SIZE** to a desired block size. For example, **NSR_READ_SIZE=65536** forces NetWorker to use 64KB block size during the read process.

Windows Disaster Recovery now Windows Bare Metal Recovery (BMR)

In previous versions of NetWorker, the automated offline recovery solution was called Windows Disaster Recovery (Windows DR). As of NetWorker 8.0, this feature is now referred to as Windows Bare Metal Recovery (Windows BMR).

To download the Windows BMR ISO recovery files from http://powerlink.emc.com:

1. From the EMC Powerlink home page, go to **Support › Software Downloads and Licensing › Downloads J-O › NetWorker**.
2. Locate the section for NetWorker 8.0, and then select the appropriate link to download the Windows BMR ISO recovery file:
   - Select **NW Windows Disaster Recovery x86** to download the file NetWorkerWindowsDisasterRecovery_8.0.0.*xxx*_x86.iso
   - Select **NW Windows Disaster Recovery x64** to download the file NetWorkerWindowsDisasterRecovery_8.0.0.*xxx*_x64.iso

   where *xxx* is the build number of the release version.

Device management changes

NetWorker 8.0 introduces the following enhancements to backup to disk functionality for AFTD and Data Domain Boost devices:

New daemon (nsrsnmd) for device management

A new daemon, **nsrsnmd**, provides an RPC-based service to manage all of the device operations that the **nsrmmd** process handles on behalf of the nsrd process on the NetWorker server.

This daemon Is automatically invoked by nsrd as required, ensuring that the necessary device operations are actually performed when needed by nsrd.

Note: Only one nsrsnmd service is run on each storage node with configured and enabled devices.

Device read-write functionality

Unlike earlier NetWorker releases, the 8.0 release does not create read-only mirror devices for AFTD and DD Boost devices. NetWorker 8.0 provides both write and read functionality on existing and new devices. The NetWorker 8.0 installation removes legacy read-only mirror devices.

NOTICE

If downgrading, devices created with NetWorker 8.0 will be unavailable and legacy devices and data will require manual reconstruction. Consult the *NetWorker Installation Guide* prior to performing a downgrade.

Device access information

The configuration of AFTD and DD Boost device identity is designed to handle multiple accesses:

- Each device is identified with a single NetWorker storage volume.

- Each device is defined by a single access path, although the access path may be represented in different ways for different client hosts.
- Each device may be created multiple times by giving each copy of the device a different name as an alias.

The devices access information attribute allows you to specify the complete path to the device directory when creating devices in NMC. More details are provided in the section "Probing and cloning jobs status/completion added to Savegrp reporting" on page 17.

Device sessions performance

AFTD and DD Boost devices use multiple concurrent nsrmmd (data mover) processes per device and multiple concurrent save sessions (streams or threads) per nsrmmd process. Optimal device configuration for backup or clone operations reduces the number of active devices required and thereby reduces the impact on Data Domain performance and maintenance.

Session load should be balanced among the available devices so that new sessions attach to devices with the least load. To enable optimum performance, adjustments can be made to the device Target sessions, Max sessions, and Max nsrmmd count attributes.

Licensing changes for Data Domain storage

Unlike earlier releases, NetWorker 8.0 Data Domain storage software enablers support multiple interfaces and network identities. In earlier releases, it was recommended to use an ifgroup software configuration of NICs on the Data Domain system to allow storage nodes to use the same network identity with a single Data Domain Storage system Enabler. Bandwidth aggregation is still a valid and recommended use case of ifgroup for DD Boost devices.

Storage node nsrmmd activation options

Storage node options are provided for environments where unattended firewall ports need to be restricted for security reasons. If Dynamic nsrmmds is selected, then NetWorker adds devices only on demand. This dynamic mode can improve bandwidth and performance, but firewall ports may be left unattended by running processes. If unselected (the default setting), then static mode is in effect and NetWorker starts all available nsrmmd processes. Static mode together with the "mmds for disabled devices" option offers greater control because they cause nsrmmd firewall ports to be attended by running processes.

Client Direct feature

Client Direct, also known as direct file access (DFA), is a NetWorker feature that enables clients to send backup data over an IP network directly to AFTD or DD Boost storage devices, bypassing the NetWorker storage node. The storage node manages the devices used by the backup clients but does not handle the backup data. The Client Direct feature is always used when it is available, and is selected by default in the Client Properties window in NMC, as displayed in the section "New Client Direct attribute to enable DFA in NMC" on page 16.

For Data Domain systems, the Client Direct feature leverages the DD Boost DSP component, which is installed as part of the NetWorker 8.0 client software. During backup, the DSP software on the client deduplicates the backup data before the Client Direct component sends the deduplicated data directly to the DD Boost devices. By working together, the DD Boost and Client Direct features can provide highly efficient data

deduplication, transmission, and storage for multiple concurrent client backup operations. Backup bottlenecks are removed from the storage node and network bandwidth is better utilized.

Client Direct backups can be recovered by using traditional storage node functionality and conversely traditional storage node backups can be recovered by using Client Direct functionality if available.

NetWorker server in LDAP mode

NetWorker 8.0 provides the ability to distribute an LDAP configuration from the NMC server to any NetWorker server that is managed by the NMC server. This puts the NetWorker server in LDAP mode. A NetWorker server in LDAP mode authorizes LDAP authenticated users based on the LDAP groups they belong to (provided those LDAP groups have been configured as part of the "external roles" attribute).

Changes to User Group resources

The following changes have been made to the User Group resources:

- A new attribute, "External Roles" in the User Groups resource, is used to map LDAP groups into a NetWorker server 'Usergroup'. This in turn determines what NetWorker server-side privileges the LDAP-authenticated NetWorker user receives.
- NetWorker 8.0 has three new Administrators User Groups: **Security Administrators**, **Application Administrators**, and **Database Administrators**. While the **Security Administrators** and **Application Administrators** Usergroup cannot be customized, the **Database Administrators** Usergroup does allow customization.

  In previous releases of NetWorker, a single Administrators group existed (whose users attribute mirrored the entries in the administrator attribute of the NSR resource).
- The Administrators list attribute in the Server resource is independent of User Group membership. Changes to the Administrators list are not reflected in any Administrators User Group resource.

More information about User Group and Privileges and LDAP configuration is provided in the *NetWorker Administration Guide*.

Audit Logging and Accountability

NetWorker 8.0 provides a centralized logging mechanism to log security and configuration-related events that occur for each NetWorker datazone.This mechanism is called audit logging. Appendix H, "NetWorker Accountability", of the NetWorker Administration Guide provides information.

Changes to the syslog configuration file

The NetWorker 8.0 software does not modify the /etc/syslog.conf file to force the logging of NetWorker messages to operating system log files. The section "Log settings" in Appendix H of the *NetWorker 8.0 Administration Guide* provides more information.

Strong authentication recommended between NMC Console and NetWorker server

In NetWorker 8.0 and higher, the NMC Console host must use strong (nsrauth) authentication to display attribute information for certain types of resources that contain sensitive data such as NetWorker client passwords. If the NMC Console uses legacy authentication (oldauth) exclusively, then the properties of some resource types, such as NetWorker client resources, cannot be displayed.

By default, all NetWorker hosts use nsrauth and will fall back to oldauth if nsrauth does not work. However, if you are upgrading and the nsrexecd service on the NMC Console server or the NetWorker server was set up to use oldauth authentication exclusively, you should change it to use nsrauth authentication.

The most common indication that communication between the NMC Console host and the NetWorker server host is using oldauth is that an authentication error similar to the following displays when you attempt to view NetWorker client or device resources in the Administration window:

```
Unable to connect to server: Unable to authenticate with server
<server>: Authentication error; why = server rejected credential
```

However, you can still view some resources such as directives even when communication between the NMC Console and the NetWorker server is using oldauth.

To update the NMC Console host to use strong authentication first:

1. Log in as root or as Windows administrator on the NetWorker host whose authentication information will be updated.
2. Ensure that the **nsrexecd** service is running.
3. Type the following at the command prompt:

   ```
   nsradmin -p  nsrexec
   ```

   The **nsradmin** prompt appears.
4. Type the following command to access the NetWorker host's authentication information:

   ```
   . type: NSRLA
   ```
5. Type the following command to list the local hosts authentication resource settings:

   ```
   print
   ```
6. Update the host to attempt to use nsrauth authentication first, for example:

   ```
   update auth methods: "0.0.0.0/0,nsrauth/oldauth"
   ```

   The auth methods value has the following two part format:

   clientgroup_or_host, *auth_strength*

   The first part *clientgroup_or_host* identifies the host(s) that are included in this setting. The second part *auth_strength* indicates the authentication strength that the local host will use when connecting with the hosts specified in *clientgroup_or_host*.

   In this example, the value 0.0.0.0/0 represents all hosts that the local host will connect to. The value nsrauth/oldauth means that strong authentication (nsrauth) will be attempted first and if this fails, then legacy authentication (oldauth) will be attempted. More examples are provided in the *NetWorker Release 8.0 Administration Guide* in the chapter titled "NetWorker Client Management."
7. Type **Y** to save your changes:

   ```
   Update? Y
   ```

8. Verify your changes by typing print:

   print

9. Quit the nsradmin program:

   quit

10. Restart the **nsrexecd** service to make the change take effect.

The following sample nsradmin command output depicts how to update a NetWorker host's authentication information:

```
# nsradmin -p nsrexecd
NetWorker administration program.
Use the "help" command for help, "visual" for full-screen mode.
nsradmin> . type: NSRLA
Current query set
nsradmin> print
                          type: NSRLA;
                          name: jupiter;
              nsrmmd version: ;
             nsrsnmd version: 8.0.Build.38;
NW instance info operations: ;
       NW instance info file: ;
          installed products: ;
                     servers: ;
                auth methods: "0.0.0.0/0,oldauth";
           max auth attempts: 8;
               administrator: root, "user=root,host=jupiter";
                        arch: sparc;
                  kernel arch: sun4u;
                           OS: SunOS 5.10;
           NetWorker version: 8.0.Build.38;
              client OS type: Solaris;
                        CPUs: 1;
                     MB used: 60219;
                  IP address: 112.254.444.37;
nsradmin> update auth methods: "0.0.0.0/0,nsrauth"
                auth methods: "0.0.0.0/0,nsrauth";
Update? y
updated resource id
   0.2.64.77.0.0.0.18.79.110.111.94.132.222.435.52(12)
nsradmin> print
                          type: NSRLA;
                          name: jupiter;
              nsrmmd version: ;
             nsrsnmd version: 8.0.Build.38;
NW instance info operations: ;
       NW instance info file: ;
          installed products: ;
                     servers: ;
                auth methods: "0.0.0.0/0,nsrauth";
           max auth attempts: 8;
               administrator: root, "user=root,host=jupiter";
                        arch: sparc;
                  kernel arch: sun4u;
                           OS: SunOS 5.10;
           NetWorker version: 8.0.Build.38;
              client OS type: Solaris;
                        CPUs: 1;
                     MB used: 60220;
                  IP address: 111.222.333.44;
nsradmin> quit
```

New storage node attributes in NMC to enable storage node resource

Storage node resources can now be enabled or disabled within the NMC Storage Node details pane. Two new attributes, **Enabled/Disabled** and **Ready**, are visible in the window. Highlight the storage node resource, then right-click the resource to select Enable/Disable from the drop-down. You can also select multiple storage nodes to enable/disable more than one resource at the same time in the Storage Node details pane, displayed in Figure 1 on page 13.

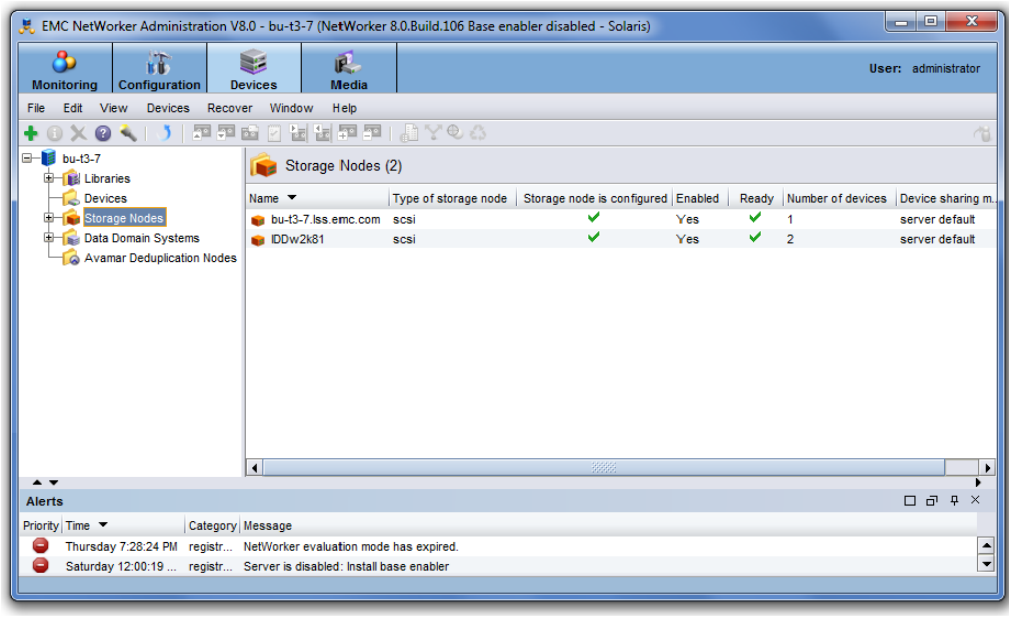

Figure 1 Storage Node details pane

Clone storage node information now located in Devices tab in NMC

Previously, clone storage node information was stored in the Client Properties (Globals 2 of 2) under the Configuration tab in NMC. This information is now located in the Storage Node properties under the Devices tab in NMC, as displayed in the following figure. Right-click the storage node in the Devices tab and select Properties. The properties for Clone storage nodes are specified under Configuration.

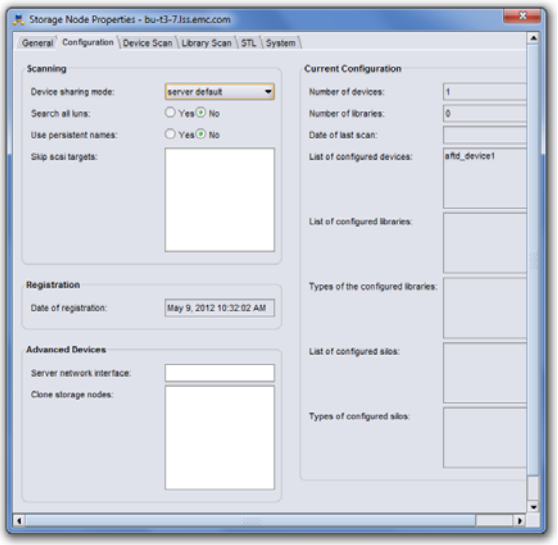

Figure 2 Clone storage nodes in NMC

Stopping a session from NMC

Some NetWorker sessions (backup, synthetic full backup, and clone sessions) that previously could only be stopped from the command line can now be stopped from NMC. Cancel the session by highlighting the session in the NMC Administration window, right-clicking and selecting **Stop** from the drop-down.

The following table provides a list of actions that can be stopped from NMC.

Table 2 Sessions that can be stopped from NMC

Session type	Stop from NMC?
Save by Save Group	Yes
Synthetic Full by Save Group	Yes
Clone by Save Group	Yes
Schedule Clone	Yes
Manual Save	No
Manual Clone via NMC	No
Manual Clone via CLI	No
Recover	No

When a session is cancelled from NMC, this does not impact any other group operations running.

Multiple resource editing

Within NMC's Configuration view, you can edit an attribute for multiple resources at the same time. For example, to change the backup schedule for all clients within a group from the default to “Full Every Friday,” select each client resource row in the window, then place the cursor in the column you want to change. The color of the column will change when the cursor is in the column. Right-click in that column, then select from the options available in the drop-down menu. The options include **Edit**, **Add to** and **Remove from**, depending on the column selected..

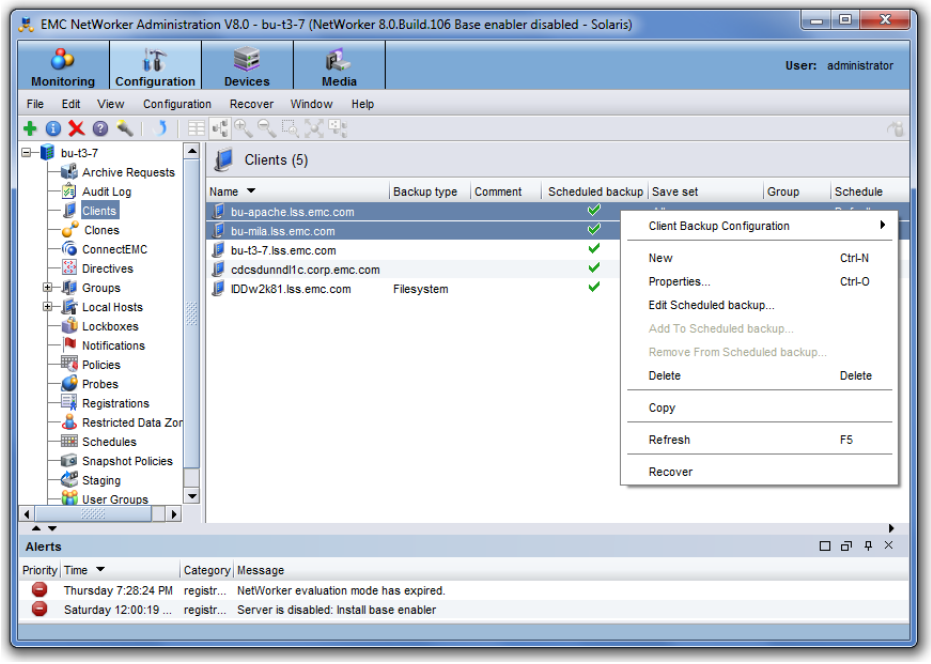

Figure 3 Multiple resource editing in NMC

Note: You can only select the columns that appear in the window. If the column you want to edit for multiple resources is not in view, add the column by right-clicking on a table header and selecting Add Column from the drop-down, then selecting from the list of available attributes.

Device Access Information attribute in NMC

The Device Access Information attribute is a new attribute available when creating new devices in NMC. In this attribute, specify the complete path to the device directory. You can provide alternate paths for the Storage node and for Client Direct clients, as shown in the following:

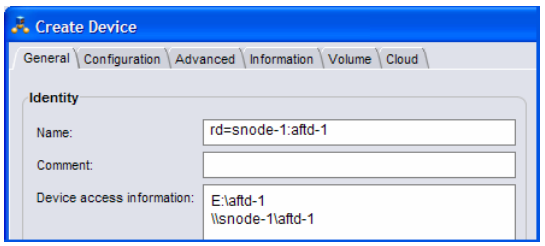

Figure 4 Device access information attribute in NMC

Multi-Tenancy Facility option

The Multi-Tenancy Facility option allows you to create restricted data zones so that users can concurrently use a single NetWorker data zone without being able to view data, backups, recoveries, or modify each other's virtual data zones. Tenant Administrators within a restricted data zone cannot see the information managed at the global data zone level, or the information managed for other restricted data zones.

To enable the Multi-Tenancy Facility feature, configure the new Restricted Data Zone resource on the NetWorker server. A restricted data zone is associated with its own NetWorker resources.

Note: NetWorker Module for Microsoft Application (NMM) is not supported within a Restricted Data Zone.

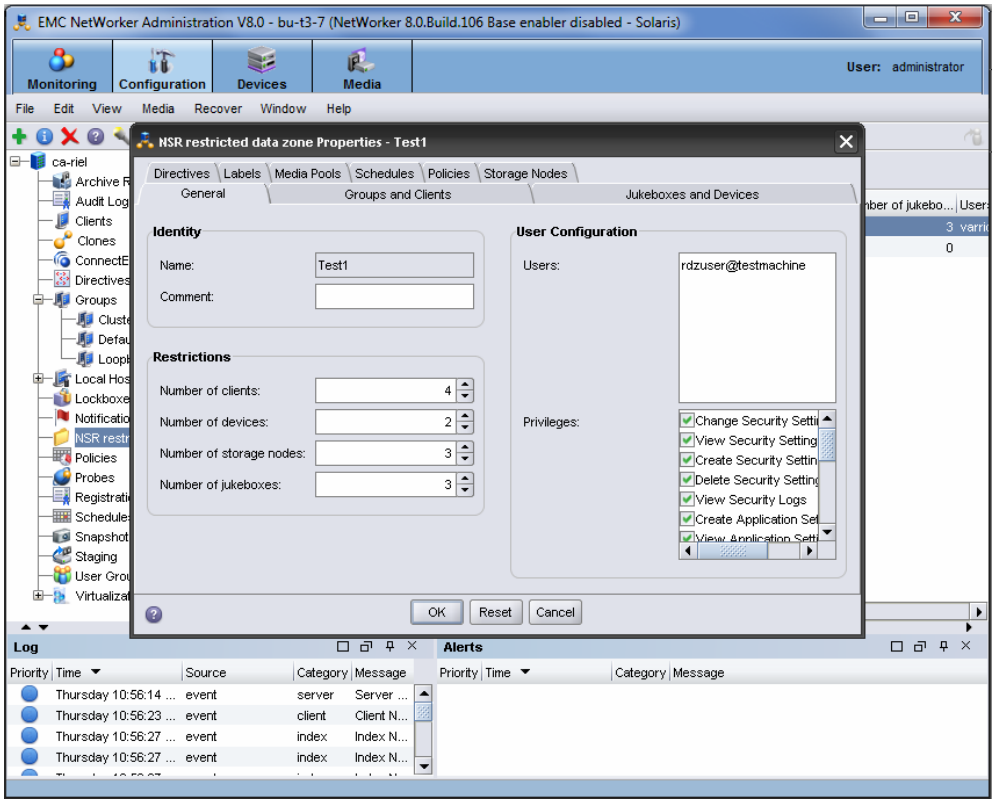

Figure 5 Restricted data zone properties window

New Client Direct attribute to enable DFA in NMC

A new attribute, Client Direct, allows you to enable direct file access (DFA) for the client resource so that client backups can bypass the storage node and send deduplicated backup data directly to DD Boost storage devices, or send non-deduplicated backup data directly to AFTD storage. The Client Direct option is selected by default and is located in the General tab of the Client Properties window, as shown in the following figure:

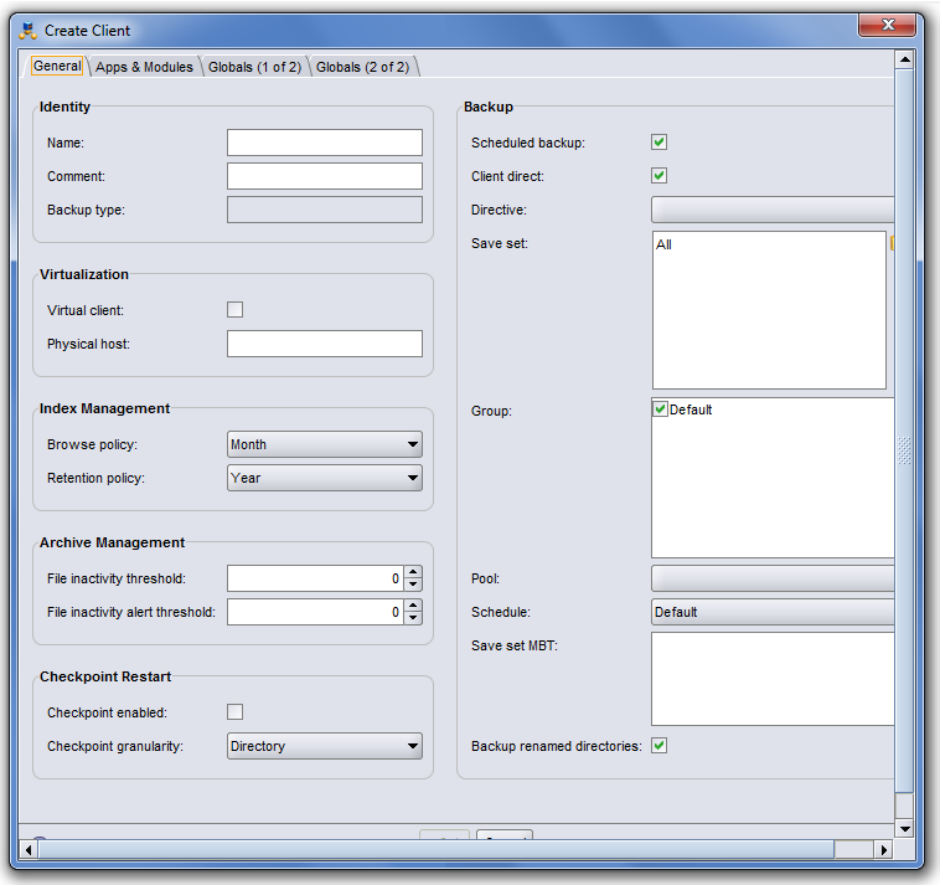

Figure 6 Client Direct attribute in Client Properties window in NMC

Probing and cloning jobs status/completion added to Savegrp reporting

Savegrp reporting in the Monitoring window of NMC now includes job status and% completion for probing and cloning in addition to profiling and saving.

Probing and cloning tables appear in the Group Details dialog box.

Synthetic full backups

A synthetic full backup combines a full backup and subsequent incremental backups to form a new full backup, reducing recovery time because the data is restored from the single synthetic full backup, instead of from a combination of the last full backup and the incremental backups that follow it. After the first synthetic full backup, the next synthetic full backup (synthetic full with catch-up incremental) combines the previous synthetic full backup and subsequent incremental backups.

A synthetic full backup is the same as a traditional full backup. The Synthetic full sessions appear in the Monitoring window in NMC, along with Recover, Save, Clone, and Browse sessions.

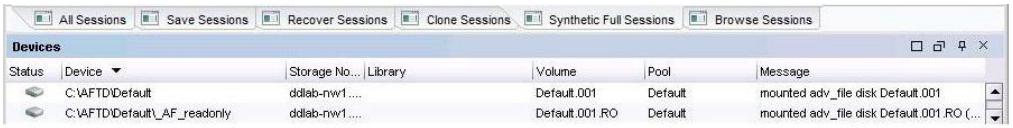

Figure 7 Synthetic full sessions in the NMC Monitoring window

You can schedule synthetic full backups from the Schedule resource in NMC, or set up the backup in the **Client Properties** page of the Client Configuration wizard.

Note: You cannot create synthetic full backups from full, level, or incremental backups created with NetWorker versions prior to NetWorker 8.0. This feature supports file system backup only.

More information on synthetic full backups is provided in Chapter 2, "Backing Up Data", of the *NetWorker Administration Guide*.

NetWorker support for ASR disaster recovery of Windows XP and 2003 clients

Beginning with NetWorker 8.0 clients, ASR backup for Windows XP Professional and Windows Server 2003 is no longer supported. However, ASR recovery using pre-NetWorker 8.0 client ASR save sets is still supported.

For bare metal recovery protection of NetWorker clients that run Windows Server 2008 and Windows 7 and later supported Windows operating systems, refer to the chapter "Windows Bare Metal Recovery" in the *NetWorker Administration Guide*.

Report home

The Report home feature enables the delivery of NetWorker platform usage information to EMC. Having information on the types of platforms on which NetWorker is being used allows EMC to better serve your existing and future platform needs. No other information or client data is sent to EMC. The Report home feature is enabled by default during the installation of the NetWorker server and requires email capability on the NetWorker server.

License management enhancements

NetWorker License Manager (NLM) now provides views of license use records, allowances, and capacity information in the Setup tab of the NMC Administration window. Administrators can create and modify allowances using the new NLM folders.

Additionally, capacity license reports are now available in the Reports tab, and a License Compliance Summary report displays in the Configuration task view.

Automatic volume relabel

NetWorker 8.0 introduces the ability to schedule the automatic relabeling of eligible volumes in a pool. In prior releases, volumes would be relabeled at the time of backup or clone and only when the selection criteria was met.

Automatically relabeling a recyclable volume provides the following benefits:

- Volume relabelling outside of the backup window without the need for a scripted solution.
- Appendable volumes available at the time of a backup or clone, resulting in faster backup and clone completion times.

The “Managing volumes in a media pool” section in the *NetWorker Administration Guide* provides further details.

NDMP client configuration enhancements

When configuring a NDMP client, an option is now available in the Client Properties window to enable browsing of the NDMP host file system for save set selection. To browse the NDMP file system, select the NDMP checkbox in the **Apps & Modules** tab of the Client Properties, and specify a Remote user and password.

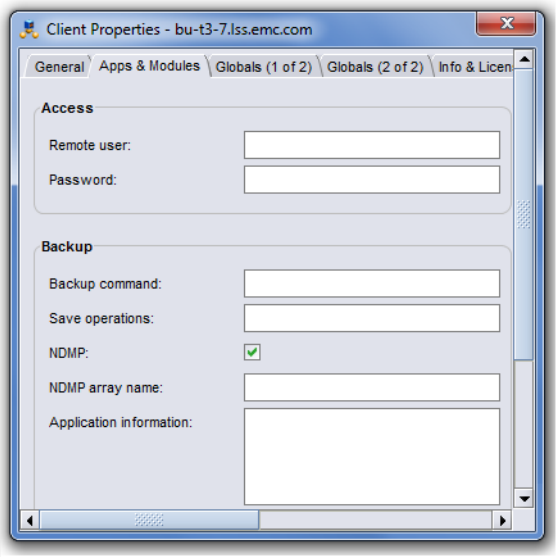

Figure 8 NDMP option in Apps & Modules tab of NMC

After performing these actions, the Choose Directory dialog box displays, containing the NDMP host file system for selection.

Restricting backup and recover access to a NetWorker server

NetWorker 8.0 introduces two new attributes to configure a NetWorker server to not accept any new backup or recover sessions in preparation of a NetWorker daemon shutdown or server reboot. Restricting access to the NetWorker server allows you to temporarily take all the storage nodes offline for the purposes of troubleshooting. The “Restrict backup and recover access to the NetWorker server” section in the *NetWorker Administration Guide* provides further information around how to prevent the NetWorker server from accepting new backup and recover sessions.

New savegroup failure notification

A new preconfigured notification alerts a user when a backup fails to start at the scheduled time. By default, the report is sent:

- To the savegrp.log file for a Windows NetWorker server.

- By email to the root account of the UNIX NetWorker server.

The “Notifications” section in the *NetWorker Administration Guide* provides further details.

Filtering the savegroup completion report messages

NetWorker 8.0 introduces the ability to filter the savegroup completion messages on a UNIX NetWorker server based on a user defined filter file using a new nsrscm_filter command. The “Filtering Savegroup completion report messages” section in the *NetWorker Administration Guide* and the main page provide further details.

New file (nsrrc) for NetWorker environment variables

NetWorker 8.0 introduces support for a new NetWorker environment variable file, /nsr/**nsrrc**. Sourcing of this file occurs before starting the NetWorker processes. In previous releases of NetWorker, environment variables were commonly specified in the NetWorker startup script. These startup script files were overwritten when a software upgrade or reinstall occurred. The new /nsr/nsrrc file is not removed when upgrading or reinstalling the software.

Variables added to this file must also be added to the NSRLA resource or they will not be picked up by saves spawned by **nsrexecd**.

The chapter “Backup to tape and VTL” in the *NetWorker Administration Guide* provides further details regarding the creation and use of this new file with the appropriate NetWorker environment variables.

HomeBase agent no longer included in NetWorker software installation

In NetWorker 8.0, the HomeBase agent software is not bundled with the NetWorker packages. Download the Homebase agent software from the EMC Online Support website and install HomeBase, independent of the NetWorker software.

Updated version of Sybase SQL Anywhere

Releases of the NetWorker Console server software previous to NetWorker 8.0 embed Sybase SQL Anywhere 9. The NetWorker Console server 8.0 software embeds Sybase SQL Anywhere 12. During an upgrade of the NetWorker Console server software to 8.0, the NMC database automatically converts to the newer database format. The *NetWorker 8.0 Installation Guide* provides further details to update the NetWorker Console server.

Preference given to read-only devices for recovery

In NetWorker 8.0, if the required volume is not already loaded into a device, preference is given to mount the volume in an eligible read-only device, if one is available.

Ability to rollover the daemon.raw file in real time

In NetWorker 8.0, a new environment variable provides automatic rollover and truncation of the daemon.raw and gstd.raw files when these files exceed the maximum defined size. The Log file size management section in the *NetWorker Administration Guide* provides more details on how to configure and use this feature.

Version of Apache server updated to Apache 2.2.17

The NetWorker 8.0 console server software embeds Apache server version 2.2.17

New compression directive (compressasm) supported by NetWorker

The **compressasm** directive compresses files so that they use less network bandwidth and fewer volumes. The following three types of compression are supported:

- default NetWorker compression
- gzip compression
- bzip2 compression

For gzip compression, specify the -gzip argument as in the following:

```
+compressasm -gzip X: .
```

where *X* is a compression level from 0 to 9. If no level is specified, the default value is 6

For bzip2 compression, specify the -bzip2 argument as in the following:

```
+compressasm -bzip2 X: .
```

where *X* is a compression level from 0 to 250. If no level is specified, the default value is 0.

For both gzip and bzip2 compression levels, 0 provides the least compression and, as the number increases, the more compression is applied. Added compression uses more CPU resources and therefore, could increase backup times. Both gzip and bzip2 compression cannot be used with the aes encryption ASM.

Consider the following when using **compressasm**:

- This ASM does not compress directories
- The amount of compression achieved is data-dependent
- This ASM can use considerable CPU resources, so its benefits could be limited on low-powered systems
- Some storage devices such as cloud devices and deduplication devices have their own encryption capabilities. If such a device is already set up to compress data, then using the compressasm will likely yield no added benefit.

Passwords no longer used in command line arguments

The use of passwords in command line arguments has been discontinued. Instead, authentication and authorization of the user occurs upon executing the command.

New option VSS_ALLOW_DEFAULT_PROVIDER

By default, the NetWorker client always chooses the Windows VSS system provider for VSS backups. If you want to use a hardware provider or a specific software provider for a particular NetWorker client, you can now enter the following command in the NetWorker client resource Save Operations attribute:

VSS:VSS_ALLOW_DEFAULT_PROVIDER=yes

The NetWorker 8.0 Administration Guide provides more information, such as the selection criteria for backup providers.

Note: Windows BMR backups always use the Windows VSS system provider, even if this command is specified for the NetWorker client resource.

VSS:*=OFF option to completely disable VSS

An option is now available to completely disable VSS. When **VSS:*=OFF** is set on Windows XP and 2003, the file system and the system components are backed up by using the legacy method, which means that the backup is performed without taking a snapshot. When this option is set on Windows 7, 2008 and higher, VSS backups will not occur, however, backup of certain save sets fails. The known limitation "NW128078" on page 45 provides more information.

Idle Device Timeout default value changed to 10 minutes

The Idle Device Timeout attribute specifies the number of minutes a mounted volume can remain idle before it is automatically unmounted from the device and returned to its slot, where it can then be accessed by another device. Previously, the default value was 0, meaning there was no timeout. In NetWorker 8.0, the default value for the attribute is 10 minutes. The section "Automatic unmounting of volumes (idle device timeout)" in the *NetWorker 8.0 Administration Guide* provides details on setting this attribute.

Persistent device names can now exceed 1024 SCSI devices on Linux

Previously, NetWorker supported up to 1024 persistent device names for tape and media changer devices on Linux. This limit has been removed.

In order to support 1024 or more persistent device names, the setting for the st tape driver (which supports 128 drives by default) must be increased by modifying the st module of the Linux kernel. The driver may then require recompiling, depending on the Linux version running. Refer to Linux documentation for details about how to reconfigure, rebuild, and install the kernel.

Support for enabling of SELinux on Linux platforms

Previously, mandatory access control architecture SELinux required disabling on Red Hat 5 and 6. With NetWorker 8.0, you can now enable SELinux for Linux platforms.

Checkpoint restart backups for NDMP client

NetWorker 8.0 supports checkpoint restart for NDMP NetApp Clients, providing the ability to perform checkpoint restart for a failed backup of a NetApp filer.

To configure the NDMP client for checkpoint restart, select the **Checkpoint enabled** option under the **General** tab for the Client resource in NMC. Chapters "Backing Up Data" and "NetWorker support for NDMP" of the *NetWorker Administration Guide* provide more information and considerations when setting up NDMP clients for checkpoint restart.

Note: If either the NetWorker server or the NetWorker host initiating the NDMP backup is an earlier version, then the checkpoint restart feature is not supported for the NDMP NetApp backup.

NMM 2.3 not supported with NetWorker 8.0

NetWorker Module for Microsoft Applications (NMM) 2.3 is not supported with NetWorker 8.0. Update the NMM client to NMM 2.4 before updating the NetWorker server and storage nodes to NetWorker 8.0.

NMM client configuration support in NMC Client Configuration wizard

The NMC Client Backup Configuration has been enhanced to support configuration of NMM clients. To support configuring the NMM clients, the **Specify the NetWorker Backup Group** page of the wizard displays the snapshot information, and a new wizard page, **Specify the Snapshot Policy**, allows you to create a new snapshot policy.

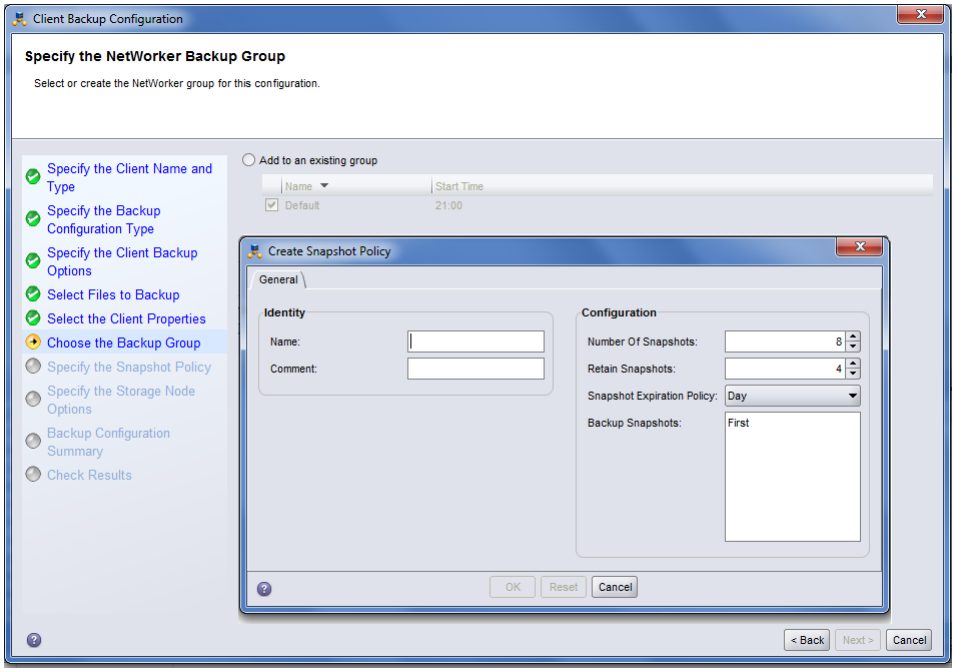

Figure 9 NMM configuration in Client Configuration wizard

From the NMC Configuration tab, the Group table displays existing groups with Snapshot enabled for NMM client and existing groups without Snapshots enabled for non-NMM client.

Fixed problems

This section provides details on fixed bugs for the NetWorker 8.0 releases.

Information on fixes included in the latest build of NetWorker is available in the Cumulative Fixes document. Go to the EMC Online Support site at http://support.emc.com, select Support by Product and type NetWorker. From the NetWorker page, click on Documentation.

The latest cumulative build can be downloaded from the following link:

ftp://ftp.legato.com/pub/NetWorker/Cumulative_Hotfixes/8.0

Fixed bugs in release 8.0 SP2

Table 3 on page 24 lists customer reported defects resolved in release 8.0 SP2.

Table 3 Fixed in NetWorker Release 8.0 SP2 (page 1 of 4)

Issue Number	Description
NW117492	Mixed encoding in nsr_render_log output in Japanese
NW139478	The gstd.exe service crashes when accessing device configuration
NW139795	Cloning sessions in NMC display incorrect size and total size when cloning a large amount of data
NW140577	Running the recover command with the -q option creates an unnecessary folder in the original location
NW141067	/nsr/logs/messages stops updating after a successful NMM backup
NW141297	Networker sends cleaning request to a shared tape device even if the device is disabled or in service mode
NW141518	nsrd intermittently core dumps after upgrade
NW141785	NMDA lotus client backups are rejected with incremental backups after the first full backup
NW142397	A nsrvadp_save memory leak occurs with CBT incremental
NW142588	Savegrp hangs when connecting to new clients with incorrect RPC version using SSH
NW142713	Save Set ALL fails when the variable "VSS:VSS_ALLOW_DEFAULT_PROVIDER=yes" is not set on the client
NW143236	After upgrade, NetWorker selects and distributes the first client's level to other client's of the same name, instead of adhering to the multiple instances of the client's schedule
NW143414	A nsrvadp_save.exe hang occurs after upgrading
NW143586	Data Domain Save Set Details report in NMC is missing details for large save sets
NW143616	NDMP History time in NetWorker is very large
NW143843	The inquire command does not work properly in AIX LPAR environment
NW144077	When recovery of a file that already exists in the directory fails, the existing file will be removed with a warning that NetWorker failed to recover the file
NW144433	jbconfig on HP-UX fails if the number of slots is greater than 16383

Table 3 Fixed in NetWorker Release 8.0 SP2 (page 2 of 4)

Issue Number	Description
NW144437	NDMP Monthly (Full backup) Clone hangs while reading the third volume
NW144691	nsrmmd functionality issues occur when NetWorker operating in Legacy mode
NW145040	Unable to scan boost volume from storage node
NW145267	nsrd hangs upon startup on RedHat Linux 6.2 after upgrade
NW145360	jbconfig segmentation fault
NW145558	Deduplication recover generates segmentation fault on Linux
NW145600	The post command starts in the end of the group instead of the end of the client
NW145764	Staging (based on High Water mark) will never trigger and stage save sets
NW145816	Client backup falls silently back to agent-assisted indirect save if storage node cannot be resolved
NW145828	Image level recovery of VM fails when vCenter Server in VADP restore window is auto populated with IP Address
NW145864	Effective permission gets changed after backup and recovery on Linux
NW145874	VADP Incremental backups not backing up files on the E and F drives
NW146027	Raw device cannot be browsed on Windows
NW146028	Under a race condition, savegroup parallelism is ignored
NW146163	nsrjobd consumes 100% CPU and NetWorker server becomes unresponsive
NW146410	nsrvadp_recover hangs during recover of VM with Physical compatibility RDMs
NW146507	Improved error logging required in libDDCL for libDDBoost init
NW146606	'Select the client you want to recover from:' list in Winworkr shows all clients
NW146709	NDMP-DSA backup fails when using the -I option to specify a NetWorker remote storage node
NW146714	After upgrade, Cluster disks are backed up by physical cluster node instead of virtual instances
NW146844	Savefs output is incorrect for NDMP clients when the save set name matches any directory name on the root of the NetWorker server host
NW146938	Problem occurs for save set and browsable recovery after successful NDMP direct backup to DD VTL device
NW146954	Snapshot group status gets set to interrupted if the backup level is “skip”
NW147084	Savegrp fails when moving cluster pkg in under certain circumstances
NW147148	NSRD core dump occurs
NW147315	VADP Full VM recover fails with message “Error writing to VMDK: 0 bytes written instead”
NW147320	After upgrade, cluster client requires require save -c ub backup command to backup virtual drives
NW147574	NetWorker Client interface for MAC does not show backups of other clients for directed recovery
NW147600	Running nsrim -X does not delete expired save set in AFTD

Table 3 Fixed in NetWorker Release 8.0 SP2 (page 3 of 4)

Issue Number	Description
NW147638	Labelling scratch volumes after upgrade fails with “cannot set record size: block size ioctl failed”
NW147898	nsrexecd leaks memory during normal operations
NW147946	nsrmmgd core dumps if two_sided media is set with an odd number of slots
NW147977	CBT incremental backups (nsrvadp_save.exe) hang for mixed cluster size VMs
NW147983	Running nsrpush -i clientname or nsrpush -u -p NetWorker -v {version} clientname can lead to local root privilege issue
NW148169	Nsrjobd consumes 100% CPU, especially when NMC is running
NW148311	NMM save sets cannot be staged successfully from AFTD read-only device
NW148383	VADP backup fails after snapshot creation with “SOAP FAULT (v1.0) End of file or no input: Operation interrupted or timed out”
NW148669	Under certain circumstances, the ASR writer is backed up and restored on a Windows 2008 client, resulting in two writers trying to recover the same files
NW148725	VADP snapshots are not deleted after backup
NW148841	Boost devices are not mounted after upgrading NetWorker.
NW148866	Parameter selection in a custom report is not honored in NetWorker when generating report using gstclreport.bat
NW148885	Storage node receives RPC errors and loss of communication with NetWorker server
NW148933	Data Domain cloning reports success but 0 bytes cloned and DD-AFTD clone fails
NW149149	Possible Data Loss when nsrim (recover space) and backups run in parallel to Data Domain volume
NW149156	Unable to recover NetApp NDMP backup taken with device block size set to 256 KB
NW149185	Save set on disk (DD/AFTD) not readable due to mismatch between size on disk and media database total size
NW149324	nsrscm_filter consistently core dumps on Solaris 10
NW149423	The gstd service hangs when querying clone job properties
NW149434	Unable to stage from two different storage nodes
NW149467	NetWorker recycles full SQL save set even though incremental save sets depend on the full save set
NW149651	NetWorker client incorrectly reports the amount of MB used in nsrlabd
NW150305	After upgrading, NetWorker relabels all the recyclable media and never mount volumes, resulting in tape requests that get queued and never met
NW150322	VADP backup failure results in consolidate error as the VM disk is locked
NW150359	nsrd.exe will not start under VCS in Windows OS when 'Mount' type resource is used for shared file system
NW150436	Clone resource cannot set start time to 0AM
NW150484	Unable to read existing label after upgrade, resulting in mount, inventory, scanner and label operations failing

Table 3 Fixed in NetWorker Release 8.0 SP2 (page 4 of 4)

Issue Number	Description
NW150521	VADP backups hang at “state active”
NW150851	nsrvadp_save hangs after upgrading the proxy
NW151098	nsrexecd may core dump if nsrladb peer information is incomplete
LGTpa89142	Savegroup requires time interval option between client retries if backup of a client fails
NW134782	Support required for SAS2 HBA on Solaris 10
NW139888	Requirement to allow non-root users the ability to browse/recover save sets containing ACL/metadata associated with root permissions
NW144226	nsrcpd should run as continuous daemon from start of Software Distribution until shut down
NW146628	No man pages on linuxs390 package
NW149588	Cannot recover OSSR_BCDoc.xml during disaster recovery, fails with error “unable to set 'compressed' attribute”
NW150204	Requirement to support IBM SILO library on Linux
NW150714	Adding vSphere 5.0.2 support to VADP solution.
NW151457	Update libDDBoost.so to include BOOST 2.5.2.2 library

Fixed bugs in release 8.0 SP1

Table 5 on page 29 lists customer reported defects resolved in release 8.0 SP1.

Table 4 Fixed in NetWorker Release 8.0 SP1 (page 1 of 3)

Issue number	Description
NW145454	Improper flow of control when using local directive
NW144230	Unknown host error returned when nwrecover started from NMC
NW140787	Mminfo reports NDMP save sets with more files than on actual file-system and in index
NW145834	Save Set All cannot be performed for NDMP clients
NW141010	NMC dbsrv12 process goes into a defunct state on SUSE Linux x64 v. 11 SP 2
NW145349	Nsrexecd crashes after attempting to start the other NetWorker server daemons on AIX 6.1
NW141977	VADP Client backup always runs a full Image level backup
NW144713	Unable to do FLR backups for VMs with no drive letters assigned to a partition
NW146617	Nsrvadp_save.exe Faults on LIBVMDK.dll (Dump Review)
NW145197	Version mismatch messages repeated in daemon log when NetWorker server is clustered
NW146508	Volumes marked VL_DIRTY do not mount, operation repeats continuously
NW146764	NetWorker Recover.app core dumps when displaying some folders
NW125800	Virtual compatible raw disk restored as local virtual disk
NW133350	Nsrmmd core dumps occasionally during scheduled cloning operation

Table 4 Fixed in NetWorker Release 8.0 SP1 (page 2 of 3)

Issue number	Description
NW136212	NetWorker in DDS environment does not honor storage node attribute Max Active Devices
NW137239	Recover report details for NDMP clients displays 0 for both the “Size(MB)” and the “Number of Files”
NW137746	Loading reports from NMC or command line takes longer than expected
NW137777	Recover target directory permissions are overwritten during NDMP recover on Celerra
NW138445	During NMM cloning, an extra volume was requested that should not have been
NW138481	NMC does not display results when Virtualization › Auto discovery is run on Solaris 10 server for VC 5
NW139191	Configured clone jobs fail but nsrclone command is successful
NW139374	VADP incremental backups fail for some VMs with error “Could not obtain the drive letter for one of the drives”
NW139705	nsrexecd memory leak occurs on Windows 2003 cluster after NMSQL server backup
NW140648	Dedicated Data Domain storage node not able to clone own save set
NW140765	Ambiguous visibility of target devices while Display Read only Devices & volumes option is checked/unchecked from View tab
NW141010	NMC dbsrv12 process goes into defunct state on SUSE Linux x64 version 11 SP2
NW141312	Synthetic full save encounters problem when symbolic link involved
NW141877	expat.so.1 shipped with NW8 conflict with expat.so.1 on latest RH...
NW141940	Browse and retention options (-w & -y) in savegrp command line not honored
NW141948	Nsrd core dump occurs after change to the hostname of Networker server
NW142266	Client cannot be created successfully due to error “’storage nodes’ contains name of remote dedicated storage node 'nsrserverhost'”
NW142426	Snapshot files not removed after VADP image level restore in san mode with more than 1 disk
NW142671	Nsrd core dump occurs when backup is started
NW143417	Nsrd initiates simultaneous mount requests for the same volume on different storage nodes
NW119422	Stop a running clone task from NMC -› Monitor -› Clones
NW128009	Optimize network socket buffer size
NW129925	NDMP DSA auto-configuration
NW131260	Include timestamp with microsecond in DDP logging for DDP/DDCL APIs and DPRINTF
NW131990	Support multithreaded DD DFA-recover w/ LIBDDP/libDDBoost 2.4 and up
NW133680	Increase default volume block size for LTO devices
NW137110	Support multithreaded DD DFA-save w/ LIBDDP/libDDBoost 2.4 and up
NW137173	Recovery of a VM with RDM restores the RDM to local disk, requiring more free space on data store
NW137186	Add print functionality to nsrinfo in order to display MySQL metadata save file

Table 4 Fixed in NetWorker Release 8.0 SP1 (page 3 of 3)

Issue number	Description
NW138307	WinDR support for uEFI - backup
NW137148	Update NMC's Apache httpd to the latest available version
NW139175	Add support to recover UEFI partitions on Windows OS
NW139589	Remove PDB bottleneck for cl invocations
NW139839	Update libDDBoost.* to version 2.5.x for NetWorker 8.0 SP1
NW139861	NetWorker Client installer should not allow uninstall if NMM is still installed
NW141003	Add support for Windows Server 2012 ReFS volume as a NetWorker critical volume
NW141144	New Avtar version to be included with NetWorker 8.0 SP1
NW141146	Changes to disaster recovery wizard to indicate Storage Spaces physicals disks and exclude Storage Spaces virtual disks
NW141397	Add a configuration option for save session distribution on Storage nodes
NW141505	Disaster Recovery backup should fail if critical volume is on Storage Spaces
NW141562	Global flag to turn off CBT/Turn on Image level backup only
NW141712	Add support to build WinPE 4.0 for NetWorker 8.0 SP1
NW141749	Add support for Ultrium LTO-6 tape drives to NetWorker
NW142046	Improve error message when data in save set attribute not owned by client on the system
NW142177	SLES High Availability Extension support
NW142503	Add a NetWorker enabler for CleanSweep
NW143639	Add vSphere 5.1 support to VADP solution
NW143745	Packaging changes to support vSphere 5.1
NW144291	Software distribution wizard server support on Solaris AMD 64 architecture

Fixed bugs in release 8.0

Table 5 on page 29 lists customer reported defects resolved in release 8.0.

Table 5 Fixed in NetWorker Release 8.0 (page 1 of 2)

Issue number	Description
NW127671	Nnsrmmdbd exits intermittently (approximately once per week)
NW135173	Networker indexd.exe remote code execution
NW137199	Savegroup hangs backing up Disk Quota Databases component of VSS SYSTEM SERVICES
NW127679	Preview for the automatic cloning scheduler is not seeing savesets over 1 day
NW129960	Save.exe uses 99% CPU usage when Avamar node is used for backup on the client
NW133220	NetWorker Client for MAC OS X Fails with error cannot start (file) Invalid argument when the file name has Apple Icon

Table 5 Fixed in NetWorker Release 8.0 (page 2 of 2)

Issue number	Description
NW133858	nsrndmp_save -D9 DSA backup render fails with “Unable to render the following message: RPC Authentication: Client failed to obtain RPCSEC_GSS credentials”
NW134973	VADP backup failing for clients in DMZ (internal error occurred: Timeout was reached)
NW136785	License Manager unable to allocate a Cluster client license as a traditional client connection license
NW137081	Manual backups reported with save set name - save - in the jobsdb
NW138056	Jbedit not working properly with virtual jukebox mapped to a clustered NetWorker server
NW129784	After upgrading, VM client proxy host settings change silently back to the first VCB proxy if there is more than one proxy
NW129907	DD Boost Device Wizard Fails with “String index out of range: 13"
NW130746	NMC does not display capacity and usage information from a Data Domain v5.x
NW130868	Show messages button is greyed out
NW131986	Nsrexecd core dumps on Windows 2003 backup server after upgrade
NW133029	Autochanger unlimited/32767 License is automatically deleted from NLM when the autochanger slots exceed 32767
NW134178	Operating system group permissions not honored for recovery
NW134549	RPC Connections active post nsr_shutdown
NW134618	Image recovery for VADP backup reports error “Failed to propagate handle” even though recover is successful
NW134657	Incorrect session details display when one group backup spans to subsequent volumes
NW135377	High CPU usage of the GSTD process after upgrading NMC
NW136479	NMC Group Details failed does not provide the messages when one client with one save set failed without index
NW136650	Nsrvadp_save crashes when VM *FULL* backup contains millions of FLR-enabled files
NW136823	Nsradmin causes nsrd core dump when given incorrect input
NW137085	Creating new devices by copying existing ones resets some attributes to default values
NW137183	Failed or aborted VADP backup does not remove snapshot from vCenter
NW137919	NetWorker does not delete bootstrap save sets from disk volumes after staging save sets to physical tape

Environment and system requirements

This section describes specific environment and system requirements.

System configuration requirements for a dedicated NetWorker server

Table 6 on page 31 and Table 7 on page 31 outline the following:

- Minimum system configuration requirements to be met when running the NetWorker software on a dedicated NetWorker server.
- Tips when setting parameters at the operating system level.

Note: If the following system requirements are not met, the performance of the NetWorker software could be significantly affected or the NetWorker daemons might crash.

Table 6 Minimum system requirements for a dedicated NetWorker server

	Minimum recommended configuration
CPU	Dual Core with a minimum of 1.5 GHz speed for each CPU
RAM	2 GB
Swap space	4 GB minimum (at least twice RAM)

Table 7 Minimum system requirements for a dedicated NetWorker server

	Minimum recommended configuration		
Kernel parameters	The following plimit values for all NetWorker daemons should be set to maximum as follows:		
	Resource	Current	Maximum
	Time	Unlimited	Unlimited
	file(blocks)	Unlimited	Unlimited
	data(Kbytes)	Unlimited	Unlimited
	stack(Kbytes)	8192	Unlimited
	coredump(blocks)	Unlimited	Unlimited
	nofiles(descriptors)	65536	65536
	vmemory(Kbytes)	Unlimited	Unlimited

The *EMC NetWorker Performance Optimization Planning Guide* provides information on tuning the operating system and is available at https://support.emc.com/.

Write access to temp folders required when using the NetWorker Software Administration wizard or nsrpush CLI for a Windows 2008 client

Microsoft Windows 2008 restricts write access to temp folders, including the folders defined in the Windows SYSTEM user's TEMP or TMP environment variable. Write permissions must be enabled when performing software updates, add to repository operations, and inventory operations using the Software Administration wizard or the **nsrpush** CLI.

On the Windows 2008 client, grant the Administrator and SYSTEM users write permissions to the temp folders defined in the SYSTEM user's TEMP and TMP environment variables.

Windows hot fix required for Vista to recover VSS System files

Due to an issue with the Microsoft Windows Vista operating system, a hot fix is required to successfully recover VSS System files. Contact Microsoft to obtain the fix. Details can be found at http://support.microsoft.com/kb/935606.

Install latest Microsoft VSS roll-up fix for Windows Server 2003

If running NetWorker on Windows Server 2003, install the latest Microsoft VSS roll-up fix. To view more information on the roll-up fix and to download the package appropriate to your platform, go to the Microsoft knowledge base article at http://support.microsoft.com/kb/940349.

Features provided with base enablers

Table 8 on page 32 lists the features that are available as part of NetWorker base enablers.

Table 8 Features provided with base enablers

Feature	Support by edition			
	Power	Network	Workgroup	Business
Number of included client connections	12	10	8	8
Parallel data streams per NetWorker server	64	32	32	32
Parallel datastreams per storage node[1]	64	32	N/A	N/A
Number of physical devices included with base enabler	32	16	4	4
Increase in datazone's devices, per storage node license	32	16	N/A	N/A
Maximum number of devices	512[2]	512[3]	4	4

1.Storage nodes available for additional cost for the Power and Network Editions only.
2.Available in NetWorker 7.2.*x* and later. For NetWorker 7.1.*x* the maximum is 256.
3.Available in NetWorker 7.2.*x* and later. For NetWorker 7.1.*x* the maximum is 256.

Additional features available with base enablers

Table 9 on page 32 lists the features that are available for support with NetWorker base enablers.

Table 9 Additional features available with base enablers (page 1 of 2)

Feature	Support by edition			
	Power	Network	Workgroup	Business
Additional client connections	Yes	Yes	No	No
Storage nodes	Yes	Yes	No	No
Cluster support	Server and Client	Client	No	Maximum 2 Cluster client connections

Table 9 Additional features available with base enablers (page 2 of 2)

Feature	Support by edition			
	Power	Network	Workgroup	Business
ClientPak Module[1] for heterogeneous environments	Yes	Yes	Yes	Yes
NetWorker NDMP Client connections	Yes	Yes	No	Maximum 2 NDMP client connections
Dynamic Drive Sharing option	Yes	Yes	N/A	N/A
NetWorker DiskBackup option	Yes	Yes	Yes	Yes
NetWorker Archive Module	Yes	Yes	No	No
Autochanger Software Modules	All	All	1-9, 1-16, 1-20, 1-32	One 1-26 included in base
NetWorker Application Modules	Yes	Yes	Yes	Yes
NetWorker Windows Server 2003 Open File Option	Yes	Yes	Yes	Yes
Open File Manager	Yes	Yes	Yes	Yes
NetWorker PowerSnap Modules	Yes	Yes	No	No
NetWorker SnapImage Module	Yes	Yes	No	Yes
VSS Support for Windows 2003	Yes	Yes	Yes	Yes
Simple Network Management Protocol (SNMP)	Yes	Yes	Yes	Yes
VTL (Virtual Tape Library)	Yes	Yes	Yes	Yes

1. The ClientPak Module license requirement was eliminated in NetWorker 7.4.1 and later.

QPK1123 and PHSS_37492 patches required to run NetWorker on HP-UX RISC 11.23

The NetWorker services cannot be started on an HP-UX RISC 11.23 system until the following patches are downloaded from the HP website:

- QPK1123(B.11.23.0712.070a) 1185010 Quality Pack Depot
- PHSS_37492

Go to http://itrc.hp.com and click **patch database** to obtain these patches. You must provide an appropriate username and login password to download the patches.

Linux st kernel max devices default configuration

By default, the Linux st kernel configures a maximum of 128 SCSI tape devices. As a result, the **inquire** command and the **Scan for Devices** operation might not detect more than 128 tape devices.

To resolve this issue, the st module of the Linux kernel must be modified and recompiled to increase the maximum number of allowable st devices created by the operating system to exceed the default value. Refer to Linux documentation for details about how to reconfigure, rebuild, and install the kernel.

Known problems and limitations

This section describes known limitations found in the entire NetWorker family of releases:

- "NetWorker 8.0 SP2 and later" on page 34
- "NetWorker 8.0 SP1 and later" on page 35
- "NetWorker 8.0" on page 41
- "NetWorker 7.6 Service Pack 3 and later" on page 50
- "NetWorker 7.6 Service Pack 2" on page 55
- "NetWorker 7.6 Service Pack 1" on page 85
- "NetWorker 7.6" on page 106
- "NetWorker releases previous to 7.6" on page 128
- "NetWorker releases previous to 7.5" on page 144

Unless the entry for a known limitation indicates that it is resolved for a specific release, the limitation applies to the release in which it is identified *and* all subsequent releases. If a limitation is resolved, it will also be identified in the fixed bugs table for the release in which it is resolved.

NetWorker 8.0 SP2 and later

Table 10 on page 34 identifies problem issues and limitations discovered in NetWorker 8.0 SP2 and later.

Table 10 Limitations discovered in NetWorker release 8.0 SP1 and later

Issue number	Description of limitation	Operating system affected	Product feature
"NW150781" on page 34	Error may appear when recovering named pipes on Mac-OS, though the recovery completes successfully	Mac-OS	Recovery
"NW149533" on page 34	Scanner command does not support use of m and f options together for NDMP tape device	Solaris	CLI

Error may appear when recovering named pipes on Mac-OS, though the recovery completes successfully

NW150781

When recovering named pipes on a Mac-OS, an error message may appear indicating that the catalog file will not be recovered. NetWorker does, however, recover the file and the recovery completes successfully, so this error can be ignored.

Scanner command does not support use of m and f options together for NDMP tape device

NW149533

When using an NDMP tape device, the **scanner** command does not support the use of the **m** and **f** options together. Avoid using the **f** option for NDMP tape devices. When run without the **f** option, **scanner** works correctly without errors.

NetWorker 8.0 SP1 and later

Table 11 on page 35 identifies problem issues and limitations discovered in NetWorker 8.0 SP1 and later.

Table 11 Limitations discovered in NetWorker release 8.0 SP1 and later

Issue number	Description of limitation	Operating system affected	Product feature
"NW148067 (esg135000)" on page 36	Microsoft VSS backups may contain inconsistent data that cannot be restored due to a Microsoft-reported issue in the Windows Volume Shadow Copy framework	Windows	Backup
"NW139407 (esg133843)" on page 36	NMM Exchange FULL save sets change to recoverable while dependent incrementals are still browseable	Windows	Backup
"NW147213" on page 37	Avamar deduplication backups of VADP clients fail for non-NTFS partitions, dynamic disks, Linux, Novell clients (fixed in NetWorker 8.0 SP2)	All	Backup
"NW137173, NW131061" on page 37	Backup and recovery of RDM disks not supported	Windows	Backup
	Optimized backup of Data Deduplication volumes not supported	Windows	Backup
"NW145009" on page 38	VSS:NSR_SYS_WRITER_WIN32_SERVCOMP_USER=yes command only supported for Windows Server 2012 clients on NetWorker	Windows	Compatibility
"NW145942" on page 38	VDDK 5.0 not compatible with Windows 2012	Windows	Compatibility
"NW136850" on page 38	Using Client Configuration wizard to configure NetWorker 7.6 SP3 or earlier client fails when server is NetWorker 8.0 SP1	AIX, Linux, Windows	Compatibility
"NW144804" on page 38	Software Distribution wizard inventory fails for Solaris AMD 64 clients	Solaris	Configuration
"NW143033" on page 39	Unable to configure StorageTek silo on Windows 2012	Windows	Configuration
"NW147400" on page 39	Upgrade of Windows 2003 R2 64-bit client using Software Distribution wizard fails	windows	Install/Upgrading
"NW142082" on page 39	Critical volume not restored after Windows BMR to a new VM using WinPE 4.0 x64 ISO	Windows	Recovery
"NW139888" on page 39	Non-root users cannot browse and recovery files if save sets contain ACL/metadata associated with root permissions	Solaris	Recovery
"NW145612" on page 39 "NW145894" on page 40	NetWorker remote code execution vulnerabilities	All	Security
"NW146153, NW145248" on page 40	Global directives not supported for VADP backup and recovery	All	VMware

Microsoft VSS backups may contain inconsistent data that cannot be restored due to a Microsoft-reported issue in the Windows Volume Shadow Copy framework

NW148067 (esg135000)

When a volume that is extended on 8 GB boundaries is extended by a multiple greater than 8 GB, a NetWorker backup that uses the Windows Volume Shadow Copy feature to create snapshots may contain inconsistent data that cannot be restored, due to a known Microsoft issue in the Windows Volume Shadow Copy. When this occurs, there will be no indication that inconsistent data has been backed up, and the backups will be marked as "Completed". This issue affects NetWorker client systems running Windows Server 2003, Windows Vista, Windows Server 2008, Windows 7, or Windows Server 2008 R2.

Additional information about the cause of this issue is available in the Microsoft KB article 2748349:

http://support.microsoft.com/kb/2748349

Note: This limitation is related to extending volumes on an exact 8GB boundary. There is no issue if:
-the volume is not extended, or
-the volume is extended, but not on 8GB boundaries.

Workaround

To fix this issue:

1. On the NetWorker client, install the Microsoft hotfix identified in the Microsoft KB article 2748349.
2. Restart the computer after applying this update.
3. Allow the next scheduled backup to run.

NMM Exchange FULL save sets change to recoverable while dependent incrementals are still browseable

NW139407 (esg133843)

Under certain circumstances, level full NMM Exchange save sets incorrectly expire before their dependent incremental save sets. When this occurs, the incremental save sets still appear as browseable while the previous level FULL save set status has been changed to recoverable. In this case, a recovery failure occurs.

All NetWorker Module for Microsoft Applications (NMM) builds in use with the following NetWorker server products are affected:

- NetWorker 8.0.0.6 and earlier
- NetWorker 8.0.1.0
- NetWorker 7.6 SP5 and earlier (including NetWorker 7.6.4.x)

Workaround

EMC strongly recommends upgrading your NetWorker server software to the following versions:

- NetWorker 8.0.0.7 or later
- NetWorker 8.0.1.1 or later
- NetWorker 7.6.5.1 or later

The cumulative hotfixes can be downloaded directly from the EMC ftp site:

ftp://ftp.legato.com/pub/NetWorker/Cumulative_Hotfixes/

Avamar deduplication backups of VADP clients fail for non-NTFS partitions, dynamic disks, Linux, Novell clients (fixed in NetWorker 8.0 SP2)

NW147213

Avamar deduplication backups fail for VADP clients with dynamic disks, non-NTFS partitions, and for VADP clients on Linux and Novell, all of which do not support incremental backups with VADP.

Backup and recovery of RDM disks not supported

NW137173, NW131061

NetWorker does not support backup and recovery of Virtual compatible raw disks (RDM). During NetWorker backup of a VM, no RDM related information is backed up, and no RDM disks/data are restored upon VM recovery. If RDM disks are required, they must be reattached after the recovery.

Note: If reattaching RDM disks after recovery, make note of all LUNs that are zoned to the protected VMs.

Optimized backup of Data Deduplication volumes not supported

NetWorker 8.0 does not support the optimized backup of a deduplicated volume. Files are backed up at their full non-optimized size. As a result, at restore time the required restore capacity may be bigger than the original deduplicated volume.

To enable scheduled backups of optimized de-duplicated volumes in a non-optimized format:

1. From the NetWorker Administration window, select **Configuration**.
2. Select **Clients**.
3. Right-click the name of the client on which you want to perform non-optimized backups, and then select **Properties**.
4. In the Properties dialog box, select the **Apps & Modules** tab.
5. In the Save Operations attribute, type the following command:

   ```
   VSS:NSR_DEDUP_NON_OPTIMIZED=yes
   ```

6. Click **OK**.

To enable manual backups from the NetWorker User application (winworkr):

1. In Windows, add a Windows system environment variable and give it the following value:

   ```
   NSR_DEDUP_NON_OPTIMIZED=yes
   ```

2. Start winworker and perform the backup.

For more information on the Windows Server 2012 Data Deduplication feature, go to Backup and Restore of Data Deduplication-Enabled Volumes at http://msdn.microsoft.com/en-us/library/windows/desktop/hh769304(v=vs.85).aspx

VSS:NSR_SYS_WRITER_WIN32_SERVCOMP_USER=yes command only supported for Windows Server 2012 clients on NetWorker

NW145009

The NetWorker client resource Save Operations attribute command "VSS:NSR_SYS_WRITER_WIN32_SERVCOMP_USER=yes" is not supported for a NetWorker Windows 8 client. It is currently only supported for NetWorker Windows Server 2012 clients.

The Windows Server 2012 System Writer separates application Win32 services files by adding a new component, Win32 Services Files. This provided NetWorker the option to backup and recover these files as part of a volume backup or system state backup. However, the Windows 8 client System Writer does not separate these files, and as a result, all application service files are classified as "System Files" and treated as part of critical system state. Without the separate classification of these files by the Windows 8 client System Writer, NetWorker must process Win32 service files on Windows 8 as system state.

VADP proxy backup and recovery not supported on Windows 2012

NW145942

NetWorker 8.0 SP1 as VADP proxy is not supported on Windows 2012 server. As a result, VADP proxy backup and recovery fails if attempted in this configuration.

Using Client Configuration wizard to configure NetWorker 7.6 SP3 or earlier client fails when server is NetWorker 8.0 SP1

NW136850

After the NetWorker servers are upgraded to NetWorker 8.0 SP1, using the NMC Client Configuration wizard to configure a NetWorker 7.6 SP3 and earlier NetWorker Client will fail.

If the NetWorker servers are upgraded to NetWorker 8.0 SP1, ensure that the NetWorker client is upgraded to a minimum NetWorker 7.6 SP4.

Software Distribution wizard inventory fails for Solaris AMD 64 clients

NW144804

Performing an inventory of a SolAMD64 client using the Software Distribution wizard fails if no supported version of the media kit is present in the repository.

Workaround

Add the current version of the Media kit to the repository. This enables the Software Distribution wizard to inventory and upgrade the latest supported products.

Example An inventory of a SolAMD64 client with a Server version that supports the SolAMD 64 platform is successful when any Media Kit (that is the same version as the server) is added to the Software Repository.

Unable to configure StorageTek silo on Windows 2012

NW143033

A communication error during silo connectivity causes the configuration of a StorageTek silo on Windows 2012 to fail using either the **jbconfig** command or NMC.

Workaround

Verify connectivity with the silo using the ACSLS Configurator tool before running **jbconfig** or using NMC to configure the silo.

Upgrade of Windows 2003 R2 64-bit client using Software Distribution wizard fails

NW147400

Upgrading a Windows 2003 R2 64-bit client from the Windows server fails when using the Software Distribution wizard. The upgrade must be performed manually.

Critical volume not restored after Windows BMR to a new VM using WinPE 4.0 x64 ISO

NW142082

After performing a Windows BMR to a system other than the original VM using the WinPE 4.0 x64 ISO image, the system does not bring storage spaces and other critical disks online. A critical volume is swapped, with that volume's data restored to the wrong disk. For example, if more than one disk is available for restore and the disks were created in an ordered list, then the first available disk is used to restore the data.

A Microsoft support incident is currently open for this issue and the Release Notes will be updated when the issue is resolved.

Non-root users cannot browse and recovery files if save sets contain ACL/metadata associated with root permissions

NW139888

NetWorker currently prevents non-root users from browsing and recovering files, if the save sets contain ACL/metadata associated with root permissions. When NetWorker encounters such save sets during recovery and determines the user is a non-root user, recovery of these files is blocked.

NetWorker remote code execution vulnerabilities

The following security vulnerabilities exist in NetWorker 8.0.0.5 and earlier versions.

NW145612

A buffer overflow vulnerability exists in the EMC NetWorker nsrindexd RPC service that could potentially be exploited by a malicious user to create a denial of service condition or execute arbitrary code.

NW145894

EMC NetWorker provides some of its services through the SunRPC remote procedure call mechanism. One of these services (nsrindexd), which listens on a dynamic port, exposes a SunRPC interface. A buffer overflow vulnerability exists in this service that could potentially be exploited by a malicious user to create a denial of service condition or execute arbitrary code on the vulnerable system in the context of the affected application, commonly system.

Workaround

The following EMC NetWorker releases address this issue:

- EMC NetWorker 8.0.0.6 and later
- EMC NetWorker 8.0 SP1 and later

EMC strongly recommends that all customers upgrade to these releases at the earliest opportunity. Registered EMC Online Support customers can download software from support.emc.com by selecting **Support by Product** and typing **NetWorker**. From this page, select **Downloads** for the latest software downloads, and **Documentation** or **Advisories** for product documentation.

VADP snapshot not supported on VM with MS iSCSI initatior

NW148050

VADP snapshot (quiesced backup) operations on the VM are not supported when using Microsoft's iSCSI initiator within the VM. If quiesced backup operations are attempted on a VM with Microsoft iSCSI LUNs attached within the guest operating system, virtual machines may fail with the following error:

```
Creating a quiesced snapshot failed because the created snapshot
operation exceeded the time limit for holding off I/O in the frozen
virtual machine."
```

Global directives not supported for VADP backup and recovery

NW146153,NW145248

Global directives are not supported by NetWorker for VADP backup and recovery. Both encryption and compression directives result in backup failure.

Note: This issue is observed only in *FULL* and ALLVMFS workflows. FLR-disabled image backups complete successfully.

NetWorker 8.0

Table 12 on page 41 identifies problem issues and limitations discovered in NetWorker 8.0.

Table 12 Limitations discovered in NetWorker release 8.0 (page 1 of 2)

Issue number	Description of limitation	Operating system affected	Product feature
"NW140994" on page 42	Volume skipped when All-ntfs specified as save set in Windows client resource (fixed in NetWorker 8.0 SP2)	Windows	Backup
"NW139076" on page 42	Some save sets fail when running synthetic full backup if the previous backup was aborted	Windows	Backup
"NW138855" on page 43	Independent disks that are skipped during VADP backup of guest VM are restored upon recovery (fixed in NetWorker 8.0 SP2)	Windows	Backup
"NW138260" on page 43	For synthetic full backups, add root "/" when specifying a save set name for UNIX clients	UNIX	Backup
"NW137334" on page 43	Write completion delay on backups performed using NetWorker server previous to 7.6.3.3 and NetWorker 8.0 storage node	Linux	Backup
"NW136696" on page 43	Synthetic full operations may fail of number of concurrent operations on storage node exceeds client parallelism on target storage node	Solaris	Backup
"NW136208" on page 44	Renamed files might skipped from a synthetic full backup on Windows	Windows	Backup
"NW133360" on page 44	Backup of Windows 8 Beta system fails when VSS System Writer reports missing files/folders that do not exist on system (fixed in NetWorker 8.0 SP2)	Windows	Backup
"NW128078" on page 45	Backup fails for certain save sets when VSS is disabled	Windows	Backup
"NW140815" on page 45	Bootstrap data that is recovered after executing mmrecov does not display in mminfo output	All	CLI
"NW138634" on page 45	Inquire command does not detect iSCSI-based VTL on Solaris 11 x64 VM	Solaris	CLI
"NW130706" on page 46	nsrgrpcomp does not produce group completion summary or print completion reports	All	CLI
"NW136616" on page 46	Creating NetWorker 8.0 clients using Client Configuration wizard fails if NetWorker server is not version 8.0	All	Compatibility
"NW136453" on page 46	Oldauth mode cannot be used for NetWorker server if using with NMC 8.0	All	Compatibility
"NW128735" on page 46	NetWorker server may fail to restart on Solaris 10 platform if NMC is on same host	Solaris	Compatibility
"NW141406" on page 47	RECOVER_FROM_REP_HOST variable setting not honored when using nsrconsolidate for rehydration of Avamar deduplicated save sets on replication node	Solaris	Configuration
"NW139511" on page 47	HP ONCPlus package required on HP-UX 11.31 ia64 to perform Data Domain operations	HP	Configuration/ Devices and Media
"NW137717" on page 47	Use GMT time zone if failure occurs when specifying Maximum time values for browse, retention and expiration policies	All	Configuration

Table 12 Limitations discovered in NetWorker release 8.0 (page 2 of 2)

Issue number	Description of limitation	Operating system affected	Product feature
"NW136874" on page 48	Read-only device of AFTD not mounted if AFTD configured on pre-NetWorker 7.6 SP3 server using NetWorker 8.0 storage node	AIX, Linux	Configuration/ Devices and Media
"NW138470" on page 48	LDAP configuration wizard shows all NetWorker servers managed by NMC instead of only NetWorker 8.0 servers	All	Configuration
"NW138408" on page 48	Windows 8 clients cannot be created using Client Configuration wizard	Windows	Configuration
"NW138085" on page 48	NSR peer information certificate does not load for NSR client	All	Configuration
"LGTsc15813" on page 48	Changes made to external role mapping for server do not display until NMC is restarted	Windows	GUI
"NW138208" on page 49	License conformance summary in NMC displays incorrect number of licenses used for NetWorker Fast Start	All	GUI
"NW138204" on page 49	NetWorker storage node device properties continue to include Read-only devices after upgrade from NetWorker 7.6 SP2	Windows	GUI
"NW137926" on page 49	nsrstage exists if recovery performed at the same time as staging and cloning completes before recovery	Windows	Recovery
"NW133500" on page 49	NetWorker client (nsrexecd) does not start after recovering VSS save sets from a previous release	Windows	Recovery
"NW130140" on page 50	nsrndmp_recover proceeds with assertion and fails intermittently	Windows	Recovery
"NW136889" on page 50	VM backup not supported for clients in suspended state	Windows	VMware

Backup problems and limitations

Volume skipped when All-ntfs specified as save set in Windows client resource (fixed in NetWorker 8.0 SP2)

NW140994

The first volume of the NTFS volumes on the client is skipped during a savegrp probe and savegrp scheduled backup when **All-ntfs** is specified as the save set in the Windows client resource.

Some save sets fail when running synthetic full backup if the previous backup was aborted

NW139076

When running a synthetic full backup, some save sets fail with the error "Failed to start save session with ‹Server›" if the previous backup was aborted. This is due to a limit to the number of **nsrconsolidate** sessions that can be run in parallel. The limit is defined as the server's client parallelism value, divided by 2.

Workaround

Under these circumstances, increase the server's client parallelism or set the client parallelism to the max value. Recommendations for client parallelism settings are provided in Chapter 17, “NetWorker Server Management,” of the *NetWorker Administration Guide*.

Independent disks that are skipped during VADP backup of guest VM are restored upon recovery (fixed in NetWorker 8.0 SP2)

NW138855

During a VADP backup of a guest VM with Independent disks, the backup logs indicate that the independent disks are not included as part of the backup and will be skipped, as expected. However, when recovering the guest VM, these independent disks are re-attached with the VM. These independent disks do not contain any data and are visible as unformatted disks.

For synthetic full backups, add root “/” when specifying a save set name for UNIX clients

NW138260

For UNIX clients, include root “/” when specifying a save set name for synthetic full backup. Not including root “/” might cause the backup to fail and the following error message to display:

```
nsrconsolidate: Saveset <save sets -name> for ssid <save set id> does
not start with '/'
```

For example, if /tmp is misspelled as tmp in the save set list of the Client resource, the backup will fail.

Write completion delay on backups performed using NetWorker server previous to 7.6.3.3 and NetWorker 8.0 storage node

NW137334

When a backup is performed using a NetWorker server previous to version 7.6.3.3 and a NetWorker 8.0 storage node, write completion does not occur until several minutes after the savegrp reports the backup completed successfully. If a recovery is attempted within that time window, the recovery will not start until the write completion notice has been written to the logs.

Synthetic full operations may fail of number of concurrent operations on storage node exceeds client parallelism on target storage node

NW136696

If the number of concurrent synthetic full operations on a storage node exceeds the client parallelism of the target storage node, some of the synthetic full operations may fail.

Workaround

Increase the client parallelism of the storage nodes to a larger value, or limit the number of concurrent synthetic full operations.

Renamed files might be skipped from a synthetic full backup on Windows

NW136208

When scheduling a full backup on Windows platforms, configure the backup levels to be equal to or greater than the previous backup level. This prevents renamed files from being skipped when the synthetic full backup is created. For example, if mixed backup levels are run before a synthetic full backup is run, renamed files might not be included in the synthetic full backup since the level backup following the incremental backup might not include the renamed files.

In this example, a synth_full backup is run after a series mixed level backups on Windows. After each backup, user data is modified where files and directories are renamed and added. The data does not change between the last backup and the synth_full backup:

```
2733595803  full
2700041446    1
2666487094  incr
2632932738    5
2599378382  incr
2565824025    9
2532269678  full      <<< synth_full
```

When a synthetic full backup is run in this scenario, the level 5 and level 9 backups might not include the files that were backed up at the previous incr backup if any files were renamed before the incr backup. In that case, a synthetic full backup that covers save sets at level full, 5 and 9 will not include renamed file backed up at level incr.

Workaround

To prevent renamed files from being skipped from a synthetic full backup on Windows, consider the following when scheduling a backup:

1. Configure Windows clients within a dedicated group; not mixed with UNIX clients.
2. Ensure that the backup levels in the schedule are equal to or greater than the previous backup level.

Backup of Windows 8 Beta system fails when VSS System Writer reports missing files/folders that do not exist on system (fixed in NetWorker 8.0 SP2)

NW133360

During backup of a Windows 8 Beta system, the VSS System Writer reports that some files/folders are missing, or returns a message indicating that the folder requires protection. However, these folders do not exist on the system. The following is an example of one of the missing folders:

%SystemRoot\Windows\ServiceProfiles\LocalService\AppData\Roaming\Microsoft\Crypto\

When these folders are not found on the system, the backup fails. This problem affects the VSS SYSTEM FILESET:\ component of system state for WinDR backups (DISASTER_RECOVERY).

Workaround

Modify the **Backup command** field in the **Apps & Modules** tab of the client resource in NMC to contain the following string:

```
save -a '"ignore-all-missing-system-files=yes"'
```

The warning messages regarding missing System Writer files/folders continue to display in the NMC message notifications, however the missing files are now ignored and the backup completes successfully.

This workaround only applies to System Writer files (VSS SYSTEM FILESET:).

Cloning and staging problems and limitations

Backup fails for certain save sets when VSS is disabled

NW128078

When VSS is disabled (**VSS:*=OFF**) on Windows 7, Windows 2008, and later versions of the Windows operating system, VSS backups will not occur and backing up the following save sets for a NetWorker client resource yields these results:

- DISASTER_RECOVERY:\ save set: Backup fails at the beginning of backup operation.
- VSS SYSTEM STATE save sets: Backup fails.
- VSS SYSTEM STATE save sets and volume save sets: Volumes are backed up but VSS save sets fail.
- ALL save set: Backups fail.

Command line problems and limitations

Bootstrap data that is recovered after executing mmrecov does not display in mminfo output

NW140815

The bootstrap data that is recovered after executing **mmrecov** does not display in the **mminfo** command output. The media database is backed up as part of the bootstrap, and that save set information is saved in the online media database (the media database recovered from a bootstrap is from a point-in-time *before* that same bootstrap save set information was added to the media database).

Inquire command does not detect iSCSI-based VTL on Solaris 11 x64 VM

NW138634

Running the inquire command from a NetWorker server with an iSCSI-based VTL configured on a Solaris 11 x64 bit VM fails to detect the drives, slots and tapes assigned in the iSCSI VTL.

nsrgrpcomp does not produce group completion summary or print completion reports

NW130706

Specifying the **nsrsgrpcomp** command with the **-S** option (for the group completion summary report) or the -C option (for the print completion message) does not produce these reports.

Compatibility problems and limitations

Creating NetWorker 8.0 clients using Client Configuration wizard fails if NetWorker server is not version 8.0

NW136616

Creating a NetWorker 8.0 client using the NMC Client Configuration wizard fails if the NetWorker server is a version previous to 8.0.

Workaround

Manually create the client.

Oldauth mode cannot be used for NetWorker server if using with NMC 8.0

NW136453

A NetWorker 7.5.x, 7.6.x or 8.0 server in **oldauth** mode cannot be used with NMC 8.0, which by default is in **nsrauth/oldauth** mode.

Workaround

Set the NetWorker server to **nsrauth** or **nsrauth/oldauth** mode.

NetWorker server may fail to restart on Solaris 10 platform if NMC is on same host

NW128735

If NMC is running on the same host as the Networker server on a Solaris 10 platform, the **nsrexecd** daemon may fail to restart. If this occurs, a socket binding error displays.

Workaround

Install one of the following patches:

- Solaris x86: 147441-04
- Solaris SPARC: 147440-04

Configuration problems and limitations

RECOVER_FROM_REP_HOST variable setting not honored when using nsrconsolidate for rehydration of Avamar deduplicated save sets on replication node

NW141406

Setting the **RECOVER_FROM_REP_HOST** variable to **yes** on the NetWorker server and running **nsrconsolidate** to perform rehydration of Avamar deduplicated save sets fails to rehydrate the save sets located on an Avamar replication node. Instead, the **nsrconsolidate** output indicates that the primary Avamar server was used as the source for rehydration.

HP ONCPlus package required on HP-UX 11.31 ia64 and HP-UX PA-RISC to perform Data Domain operations

NW139511

Data Domain device operations, such as labelling of a Data Domain volume, fail for NetWorker on HP-UX 11.31 ia64 and HP-UX PA-RISC, due to a dependency on an updated version of the HP ONCPlus (Open Network Computing) package.

Workaround

Upgrade the HPUX ONCPlus package, which contains the NFS client, to 11.31.06 or later. ONCPlus can be downloaded from HP at:

https://h20392.www2.hp.com/portal/swdepot/displayProductInfo.do?productNumber=ONCplus

Use GMT time zone if failure occurs when specifying Maximum time values for browse, retention and expiration policies

NW137717

When the maximum browse, retention, or expiration policy times specified in the command line are set close to the maximum allowable in a time zone other than GMT, NetWorker might not allow these times. If this is the case, an error occurs similar to the following for a local time zone 4 hours east of GMT:

```
# save … -y "01/01/2039 03:59:59" test.txt
5803:save: invalid retention time: 01/01/2039 03:59:59
```

Workaround

Use the GMT time zone to specify these time values. For example, in the above instance, the line should be specified as:

```
# save … -y "12/31/2038 23:59:59 GMT" test.txt
```

If you specified policy times using a time zone other than GMT and no error occurred, this change is not necessary.

Note: The UNIX man page for nsr_getdate (this man page also applies to Windows) provides more information on general date input issues under the BUGS section in the man page.

Read-only device of AFTD not mounted if AFTD configured on pre-NetWorker 7.6 SP3 server using NetWorker 8.0 storage node

NW136874

When an AFTD is configured on a NetWorker server previous to NetWorker 7.6 SP3 using a NetWorker 8.0 storage node, the read-only device of the AFTD does not get mounted.

Workaround

The read-only device must be mounted manually.

LDAP configuration wizard shows all NetWorker servers managed by NMC instead of only NetWorker 8.0 servers

NW138470

The Configure Login Authentication page of the NMC LDAP configuration wizard displays a list of NetWorker servers for which the CST configuration can be distributed. Only NetWorker 8.0 and later servers should appear in this list, however, the list currently shows all NetWorker servers managed by NMC. Ensure that you select only NetWorker 8.0 and later servers.

Windows 8 clients cannot be created using Client Configuration wizard

NW138408

NetWorker 8.0 does not support creating Windows 8 clients using the NMC Client configuration wizard. You must create these clients manually.

NSR peer information certificate does not load for NSR client

NW138085

The NSR peer information certificate file for a NSR client does not load. An error displays indicating “operation not applicable”.

Workaround

Regenerate the NSR peer certificate and clear that client's NSR peer certificate from other hosts.

GUI problems and limitations

Changes made to external role mapping for server do not display until NMC is restarted

LGTsc15813

When making a change to privileges for an external user in any directory server (Active Directory / OpenLDAP environment), NMC does not immediately display the change. A restart of NMC is required for the change to appear.

License conformance summary in NMC displays incorrect number of licenses used for NetWorker Fast Start

NW138208

In the License conformance summary dialog in NMC, the **Number Used** field under Disk Backup reflects the number of devices in use instead of the number of licenses in use for NetWorker Fast Start.

NetWorker storage node device properties continue to include Read-only devices after upgrade from NetWorker 7.6 SP2

NW138204

After upgrading from NetWorker 7.6 SP2 to NetWorker 8.0, the NetWorker storage node Device properties continue to include read-only (.RO) devices that existed previously in the device count. If any user scripts rely on this value, these scripts may require updating.

The number of devices adjusts to the current number after shutting down and restarting NMC.

Recovery problems and limitations

nsrstage exists if recovery performed at the same time as staging and cloning completes before recovery

NW137926

If a recovery is performed at the same time as a staging operation, and cloning completes before the recovery, **nsrstage** exits and an error displays indicating that recovering space from the volume failed.

Workaround

When the recovery completes, run the following command to reclaim space on the source volume:

```
nsrstage -C -V AFTD.001
```

The **-C** option instructs nsrstage to perform a volume cleaning operation by scanning a volume for save sets with no entries in the media database and recovering that space. Space for recyclable and aborted save sets is also recovered from the volume, with the save set entries removed from the media database. You can perform this operation on disk family volumes.

NetWorker client (nsrexecd) does not start after recovering VSS save sets from a previous release

NW133500

The NetWorker client process (**nsrexecd)** does not start after performing a recovery of VSS save sets that were backed up using a NetWorker release 7.5 SP4 or earlier (for example, if a NetWorker 7.5 SP4 VSS backup is recovered using NetWorker 8.0).

Workaround

Reinstall the previous version of NetWorker to perform the VSS recovery, and then upgrade the NetWorker client to the latest version and perform a full backup.

nsrndmp_recover proceeds with assertion and fails intermittently

NW130140

When nsrndmp_recover proceeds with assertion, the recovery intermittently fails. Assertions do not affect functionality.

VMware problems and limitations

VM backup not supported for clients in suspended state

NW136889

NetWorker does not support the backup of virtual machines that are in suspended state. Backing up a VM with clients in suspended state fails and returns the following error:

```
Virtual machine xxxxx is currently suspended. NetWorker does not back
up the virtual machines in a suspended state.
```

NetWorker 7.6 Service Pack 3 and later

Table 13 on page 50 identifies problem issues and limitations discovered in NetWorker 7.6 SP3, 7.6 SP4, and 7.6 SP5.

Table 13 Limitations discovered in NetWorker release 7.6 SP3 and later (page 1 of 2)

Issue number	Description of limitation	Operating system affected	Product feature
"NW133490" on page 51	VSS backup performed with NetWorker 7.6 SP2 cannot be recovered using NetWorker 7.6 SP3	Windows	Backup
"NW131610" on page 51	Index and bootstrap save times changed in Savegroup completion report to reflect job completion time instead of session completion time	All	Backup
"NW113943" on page 51	Running inquire command displays auto-changers but not tape drives on Solaris 10 and Solaris 11 SPARC platforms	Solaris	Command Line interface
"NW136068" on page 52	Notification commands moved from /usr/ucb to /usr/bin on Solaris 11	Solaris	Configuration
"NW134987" on page 52	Client resource cannot be created for a NetWorker 7.6 SP3 client using the NMC Client Configuration wizard when the NMC version is at NetWorker 7.6 SP2 or earlier	Solaris	Configuration
"NW133542" on page 52	Deduplication (Avamar and Data Domain) not supported in NetWorker 7.6 SP3 running on AIX 7.1 and Solaris 11 platform	AIX	Deduplication
"NW120687" on page 52	"curphyhost" cannot be selected using NMC Client Configuration wizard	Windows	GUI
"NW133391, NW132813" on page 53	NetWorker server process (nsrd) becomes unresponsive if started on a host with Powerpath 5.3 or 5.6 installed	Windows	Installation
"NW135238" on page 53	Permissions to base directory may be changed after save set recovery if NTFS directory contents include current and parent directories (. and ..)	All	Recovery
"NW134799" on page 53	Recovery of archived save sets/files dumps core if archived services is not enabled	All	Recovery
"NW133500" on page 49	NetWorker client (nsrexecd) does not start after recovering VSS save sets from a previous release	Windows	Recovery

Table 13 Limitations discovered in NetWorker release 7.6 SP3 and later (page 2 of 2)

Issue number	Description of limitation	Operating system affected	Product feature
"NW133449" on page 53	winworkr terminates after disaster recovery of a VM using nbd mode	Windows	Recovery
"NW132405" on page 53	DAR recovery does not recover ACL attributes in NetApp NDMP restore	All	Recovery
"NW131025" on page 54	Performing recovery on Solaris 11 as non-root user returns error	Solaris	Recovery
"NW132961" on page 54	NBDSSL transport mode not supported for VM recovery	Windows	VMware

VSS backup performed with NetWorker 7.6 SP2 cannot be recovered using NetWorker 7.6 SP3

NW133490

A VSS backup that was performed using NetWorker 7.6 SP2 cannot be recovered using NetWorker 7.6 SP3. The VSS system file recovery fails with an error similar to the following:

```
VSS BCD BOOT FILES has not been successfully recovered.
```

Workaround

After performing the upgrade, a **Full** level backup of the system must be performed so that the VSS system save sets can be recovered.

Note: Only the VSS system save sets cannot be recovered from the NetWorker 7.6 SP2 backup; all other data can be recovered using the normal recovery procedure.

Index and bootstrap save times changed in Savegroup completion report to reflect job completion time instead of session completion time

NW131610

In NetWorker 7.6 SP3, the Savegroup completion report has been changed to report the index and bootstrap backup times based on the start and end times of jobs (job completion time) instead of session completion time. These completion times are displayed for the group resource in the **Status** tab of the **Completion** section, and in the output when **savegrp** is run from the command line.

The NMC Group Details window still reports the index and bootstrap backup time based on the session completion time.

Running inquire command displays auto-changers but not tape drives on Solaris 10 and Solaris 11 SPARC platforms

NW113943

Running the NetWorker **inquire** command on the Solaris 10 and Solaris 11 SPARC platforms only displays auto-changers; tape devices are not displayed.

Workaround

Re-order items in the **/etc/name_to_major** file so that the st driver is listed before any *st drivers.

Notification commands moved from /usr/ucb to /usr/bin on Solaris 11

NW136068

Notification commands such as mail and logger have been moved from /usr/ucb to /usr/bin on Solaris 11. As a result, messages are not updated.

Workaround

Create symbolic links to point to the new location of the commands, as in the following:

```
# mkdir /usr/ucb
# ln -s /usr/bin/logger /usr/ucb/logger
# ln -s /usr/bin/mail /usr/ucb/mail
```

Client resource cannot be created for a NetWorker 7.6 SP3 client using the NMC Client Configuration wizard when the NMC version is NetWorker 7.6 SP2 or earlier

NW134987

Creating a Client resource for a NetWorker 7.6 SP3 client using the NMC Client Configuration wizard fails if the NMC version is 7.6 SP2 or earlier, due to differences in certification between NetWorker 7.6 SP2 and earlier and the NetWorker 7.6 SP3 client software.

Workaround

Perform one of the following as a workaround:

- Use the NMC client properties or **nsradmin** to create the Networker Client.
- Upgrade the NMC version to NetWorker 7.6 SP3.

Deduplication (Avamar and Data Domain) not supported in NetWorker 7.6 SP3 running on AIX 7.1 and Solaris 11 platforms

NW133542

Due to libraries that are not supported by the AIX 7.1 and Solaris 11 platforms, deduplication (Avamar and Data Domain features) cannot be used in NetWorker 7.6 SP3 running on AIX 7.1 or Solaris 11 variants.

“curphyhost” cannot be selected using NMC Client Configuration wizard

NW120687

The option to select “curphyhost” as the storage node using NMC’s Client Configuration wizard is not available. If the wizard is used on a client that has “curphyhost” defined, it will be removed from the client definition.

You must manually create the client to specify “curphyhost” as the storage node.

NetWorker server process (nsrd) becomes unresponsive if started on a host with Powerpath 5.3 or 5.6 installed

NW133391, NW132813

The NetWorker server process **nsrd** becomes unresponsive after starting NetWorker if Powerpath version 5.3 or 5.6 is already installed. This issue does not occur with Powerpath 5.5.

Workaround

Install Powerpath version 5.5, if both Powerpath and NetWorker need to co-exist on the same host.

Permissions to base directory may be changed after save set recovery if NTFS directory contents include current and parent directories (. and ..)

NW135238

When performing a recovery, a list is created that includes all files that are required to rebuild the file hierarchy. The NTFS directory contents will include references to "." and ".." (current and parent directories) within the file table and these files are included in the save set recovery. As a result the Permissions to the parent and base directory (where the data is being restored to) may be changed.

Workaround

Recover the data to a different location, and then copy the data to the desired location and set the file attributes as required.

Recovery of archived save sets/files dumps core if archived services is not enabled

NW134799

When performing a recovery of archived save sets/files using **nwrecover**, ensure that archived services for the client is enabled. If archived services is not enabled, a core dump occurs.

winworkr terminates after disaster recovery of a VM using nbd mode

NW133449

When a disaster recovery of a VM is performed using the **nbd** transport mode in **winworkr**, **winworkr** terminates. The VM still starts up without any impact and the VADP recovery completes successfully.

DAR recovery does not recover ACL attributes in NetApp NDMP restore

NW132405

Direct access recovery (DAR) or file-by-file restore does not properly recover the ACL attributes in a NetApp NDMP restore.

Workaround

When restoring ACL attributes, enable the DDAR restore and mark the entire directory where the file is located prior to recovering.

Note: If the recovery involves multiple level backups, Networker disables the DDAR restore, even if it was manually enabled prior to recovery. In this occurs, ACL recover may fail. To avoid this issue, do not to restore from multiple level backups in a single recover session, especially if ACL information is required.

Performing recovery on Solaris 11 as non-root user returns error

NW131025

Performing a recovery on Solaris 11 as a non-root user results in the following error:

```
473:recover: /emc/test-eng/: Permission denied (has acl)
6555:recover: <return> will exit.
Enter directory to browse:
```

This error occurs due to hardened security on the zfs file system, which is the default file system on Solaris 11.

Workaround

Modify the **sudoers** file to allow the non-root user group to run any command.

For example, if the group name of the non-root user is **testing**, make the following change to the sudoers file:

```
root ALL = (ALL) ALL
%testing  ALL = (ALL) NOPASSWD: ALL
```

Any user who is part of the **testing** group can then perform a recovery.

VM recovery fails for NBDSSL and hotadd transport modes

NW132961

Recovery of a VM in NetWorker fails for the transport mode **NBDSSL** and for **hotadd** mode for ESX 5.0 and with VC 5.0.

Workaround

Before performing the following steps, ensure that you delete any snapshots that are active on the VM. Do not power on the VM until these steps have been performed.

1. Right click the VM and select **Edit settings**.
2. Select the virtual hard disk and select **Remove** but *do not* delete the VMDK. Click **OK**.
3. Return to the **Edit settings** menu and select **Add**.
4. Choose **Hard Disk** and use an existing virtual disk.
5. Associate the new hard disk with the VMDK file, then click **OK**. For example, use the **Add disk** pop-up window and add the hard disks by pointing them to the correct VMDK file in the datastore.
6. Power on the VM.

NetWorker 7.6 Service Pack 2

Table 14 on page 55 identifies problem issues and limitations discovered in NetWorker 7.6. Service Pack 2.

The known limitations are separated into the following categories:

- "Backup problems and limitations" on page 59
- "CLI problems and limitations" on page 60
- "Cloning and staging problems and limitations" on page 60
- "Configuration problems and limitations" on page 61
- "Devices and media problems and limitations" on page 62
- "GUI problems and limitations" on page 64
- "Messaging problems and limitations" on page 67
- "Restore problems and limitations" on page 68
- "Security problems and limitations" on page 70
- "Windows support problems and limitations" on page 83

Table 14 Limitations discovered in NetWorker release 7.6 Service Pack 2 (page 1 of 5)

Issue number	Description of limitation	Operating system affected	Product feature
"NW128451" on page 59	Savegroup may fall back to "agent assistd indirect save"	Windows	Backup
"NW124240" on page 60	Manual backups with save command fail on Windows remote client from non-root user account	Windows	Backup
"NW124330" on page 60	SFR enabled backup not supported for NTFS partitions residing on IDE disks	All	Backup
"NW122242" on page 60	mminfo does not reset space usage after aborted savegroup	Solaris	CLI
"NW124967" on page 60	mminfo -mv and NMC show incorrect file type device (FTD) volume size after stage operation	Windows	CLI
"NW123160" on page 60	Recovery of a clone volume fails if the original backup was marked as suspect	All	Cloning and Staging
"NW120358" on page 61	Data Domain clone job records not flagged in jobsdb	All	Cloning and Staging
"NW127039" on page 61	Remote access attribute for NetWorker client resource of the NetWorker server must list names of all cluster nodes to ensure lockbox functionality on NetWorker server's cluster node	All	Configuration
"NW127956" on page 62	Active read sessions limited to 1 when recovering data from a Data Domain device	Windows	Devices and Media
"NW128111" on page 63	DD Archiver storage systems are limited to one data movement policy per NetWorker datazone by default	All	Devices and Media

Table 14 Limitations discovered in NetWorker release 7.6 Service Pack 2 (page 2 of 5)

Issue number	Description of limitation	Operating system affected	Product feature
"NW125290" on page 63	Device Configuration wizard cannot be used to label CIFS share AFTD on a Data Domain system	All	Devices and Media
"NW124165" on page 63	System error detected when labeling a Data Domain device	Windows	Devices and Media
"NW123401" on page 63	Data Domain features cannot be enabled through NMC on AIX 64-bit	AIX	Devices and Media
"NW120013" on page 63	AFTD percentage capacity not updated after capacity is changed and device is relabeled	All	Devices and Media
"NW125024" on page 64	Selecting AFTD on first window of Device Configuration wizard returns error	Linux	Devices and Media
"NW122973" on page 64	Alert not displayed in NMC on the first day of evaluation license	Windows	GUI
"NW125853" on page 64	Drive letter marked in red in Recover browser if drive is not on proxy server	Windows	GUI
"NW125786" on page 64	Scan operation fails in NetWorker User when browse sessions are open for a client while the client's save set is being scanned into the NetWorker server	Windows	GUI
"NW125671" on page 65	NMC may not display SNMP traps when traps are sent from Data Domain boxes running DDR OS 5.0 and multiple NICs are configured	All	GUI
"NW123840" on page 65	Help topic does not display for NetWorker Clone reports in NMC	All	GUI
"NW124145" on page 65	Non-readable characters displayed in the NetWorker servers search in Winworkr	Windows	GUI
"NW119577" on page 65	Multiple browse sessions displayed in NMC during single step recovery	Windows	GUI
"NW124476" on page 66	NetWorker client does not recognize HomeBase path and Profiling fails if HomeBase Agent is installed manually	Windows	Installation and upgrading
"NW119766" on page 66	Changes to handling of the nwclust.pl script when upgrading to NetWorker 7.6 SP2 in an AutoStart 5.4 and later cluster	All	Installation and upgrading
"NW122342" on page 67	Warning message appears when starting NetWorker services on UNIX	UNIX	Messaging
"NW127028" on page 69	Directed recovery to CIFS share on destination client is not supported	All	Restore
"NW126148" on page 69	Bare Metal Recovery using HomeBase and a version of NetWorker different from the one used for backup may result in dll mismatch	Windows	Restore
"NW126007" on page 70	Disaster recovery logs display "recover completion time" for metadata recovery instead of indicating that recovery of metadata was successful or identifying this as "recovery of metadata completion time"	Windows	Restore
"NW125168" on page 70	Empty file gets created after recovery fails due to incorrect passphrase	Windows	Restore
"NW122275" on page 70	Encryption attribute not set on encrypted folder after recovery	Windows	Security

Table 14 Limitations discovered in NetWorker release 7.6 Service Pack 2 (page 3 of 5)

Issue number	Description of limitation	Operating system affected	Product feature
"NW123237" on page 71	Volumes that are BitLocker encrypted will not be encrypted after recovery	Windows	Security
"NW129816" on page 71	VADP only supports English Windows operating systems for vCenter/Virtual Center and VADP proxy	Windows	VMware support
"NW129735" on page 71	Incorrect proxy information displayed in NMC for VM client resource after upgrading the NetWorker server to 7.6 SP2	Windows	VMware support
"NW129337" on page 71	Backup of a Windows 2003 VM is not browsable	Windows	VMware support
"NW129041" on page 72	NMC does not display VMs when auto-discovery is run on Linux with vCenter 4.1 update 1	Windows	VMware support
"NW129093" on page 72	Unable to browse guest based backups on non NTFS filesystem (applies to NetWorker 7.6.2.1 build 638 and later)	All	VMware support
"NW127928" on page 73	Recovering non-Windows VMs that have a mix of VADP image-level and client-based backups (fixed in NetWorker 7.6.2.1 build 638 and later)	UNIX, Linux	VMware support
"NW127589" on page 74	Transport mode falls back to NBD mode when configured transport modes SAN or hotadd are not available on non-NTFS VMs	Windows	VMware support
"NW127651" on page 74	CBT tool does not return error when attempting to use with non-NTFS VMs	Windows	VMware support
"NW127446" on page 74	Non-NTFS thin disk VMs get restored as thick disk during disaster recover	Windows	VMware support
"NW127004" on page 74	FULLVM backup of a NTFS VADP client falls back to non-NTFS mode if the drive has an unformatted partition	Windows	VMware support
"NW126608" on page 75	VADP backup fails with VDDK error when specified transport mode is not available	Windows	VMware support
"NW126553" on page 75	VM does not power on after disaster recovery of CBT-enabled backup	Windows	VMware support
"NW126457" on page 75	NetWorker User program cannot be used for VADP recovery in non-English locale	Windows	VMware support
"NW126321" on page 75	Guest backups of Windows 2008 R2 and Windows 2007 may fail on ESX 4.0	Windows	VMware support
"NW125927" on page 76	SYSTEM accounts must have Full Control permissions for all NTFS disks to back up Windows VMs	Windows	VMware support
"NW125800" on page 76	Virtual compatible raw disk restored as local virtual disk	Windows	VMware support
"NW125515, NW125130" on page 76	Using SAN transport mode results in slow performance for disaster recovery from physical proxy of VM with thin disks	Windows	VMware support
"NW125230, NW125142" on page 76	Recovery of a VM using SAN or hotadd transport mode requires policy be set to OnlineALL	Windows	VMware support
"NW125212" on page 77	Savegroup output of VADP ALLVMFS backup still refers to VCB directive	Windows	VMware support

Table 14 Limitations discovered in NetWorker release 7.6 Service Pack 2 (page 4 of 5)

Issue number	Description of limitation	Operating system affected	Product feature
"NW125179" on page 77	"Release disk lease" messages appear during SAN mode backup	Windows	VMware support
"NW125164" on page 77	FULLVM level -0 backup must be performed after enabling CBT on the VM	Windows	VMware support
"NW125084" on page 77	NetWorker uninstallation on VADP proxy host	Windows	VMware support
"NW124883" on page 77	Application information attributes for VADP backups should be added to all resources if multiple instances are created with the same proxy name	Windows	VMware support
"NW124800" on page 78	NMC Client Configuration wizard allowing duplicate proxy clients to be created and configured on different mount points	Solaris	VMware support
"NW124730" on page 78	Using hotadd transport mode to access a datastore directly attached to a remote ESX host may return VDDK error	Windows	VMware support
"NW124431" on page 78	Temporary mnt folder gets created when recovering data from CBT-enabled VM backup	Windows	VMware support
"NW123719" on page 78	vSphere Client cannot be launched from NMC for VMware Infrastructure Client 2.5	All	VMware support
"NW123164" on page 78	VADP backup may fail for VM name containing special characters	Windows	VMware support
"NW123219" on page 79	Progress messages display during VADP backup and recovery	Windows	VMware support
"NW123142" on page 79	Port ID does not get restored after disaster recovery of a VM originally connected to dvSwitch	Windows	VMware support
"NW122619" on page 79	VADP backup fails if Datastore name contains the characters % & = ?	All	VMware support
"NW122586" on page 79	Restoring a VM back to vApp container fails with error "A specified parameter was not correct"	All	VMware support
"NW122566" on page 80	Client Configuration wizard cannot be used to configure default client as proxy if NetWorker server and proxy client are used on the same machine	Windows	VMware support
"NW122389" on page 80	Web browser displays a 404 Not found or similar error the first time the vSphere client is run from NMC if the default port number of the Virtual Center server has been changed	Windows	VMware support
"NW122381" on page 80	All save sets (NTFS and non-NTFS backups) marked as browsable	Windows	VMware support
"NW122197" on page 80	Backup of VM on ESX 3.5 fails for VMs using short name	All	VMware support
"NW122090" on page 81	Incorrect warning message appears in Savegroup log file during non-NTFS backup of VM with independent persistent disk	Windows	VMware support
"NW121958" on page 81	VM backup fails with HTTP Error 500 in cases where VM resides in a VMFS datastore which is shared by multiple ESX/ESXi hosts or in cases where the VM resides in HA/DRS Cluster setup	Windows	VMware support
"NW121168" on page 81	Incremental backup of a VM with image-based backups	All	VMware support

Table 14 Limitations discovered in NetWorker release 7.6 Service Pack 2 (page 5 of 5)

Issue number	Description of limitation	Operating system affected	Product feature
"NW121068" on page 81	VADP_* and VCB_* application information attributes both supported for VADP implementation	Windows	VMware support
"NW120474" on page 81	VM cannot be restored to folder "Discovered Virtual Machine	Windows	VMware support
"NW120006" on page 82	vSwitch becomes blank when performing disaster recovery of a VM to an ESX server different than the original server	Windows	VMware support
"NW119897" on page 82	Improper error message appears when invalid datastore is specified during VADP restore	Windows	VMware support
"NW119729" on page 82	Error messages for system related files appear during disaster recovery of a VM on Windows 2008	Windows	VMware support
"NW119040" on page 82	SSID recovery of incremental backup that has not changed since the last incremental backup results in second drive that is not needed being recovered	Windows	VMware support
"NW119468" on page 82	networkr.raw output should be properly formatted	Windows	VMware support
"NW119466" on page 83	Windows 2008 FULLVM backup displays warning messages in savegroup log even though backup is successful	Windows	VMware support
"NW118840" on page 83	Improper error message appears when disaster recovery run from command line without -o option	Windows	VMware support
"NW118828" on page 83	VMs created in vCenter or folders created on proxy not cleaned up when recovery is stopped	Windows	VMware support
"NW118382" on page 83	Remove snapshot operations are triggered when DR is started with winworkr or from the command line	Windows	VMware support
"NW127613" on page 83	VSS SYSTEM FILESET save set may fail to back up the boot configuration data properly	Windows	Windows support
"NW127617" on page 84	DISASTER_RECOVERY save set may fail to back up the BCD properly	Windows	Windows support
"NW126617" on page 85	Windows disaster recovery offline restore logs may be temporarily unavailable for browsing	Windows	Windows support
"NW123457" on page 85	Windows Disaster recovery may fail if target system has more disks than the original system	Windows	Windows support
"NW124548" on page 85	Save set consolidation not supported for Data Domain devices configured on Windows 2008	Windows	Windows support
"NW121933" on page 85	Resource pool path uses forward slash for path separator instead of backward slash	Windows	Windows support

Backup problems and limitations

Savegroup may fall back to "agentassistd indirect save"

NW128451

A savegroup may fall back to "agent assistd indirect save" due to an authentication issue between the NetWorker client and server.

Workaround

Perform the following steps to resolve this issue:

1. Add the hosts file entry in the server, storage node, and client.
2. Remove the peer information on all the machines.
3. Restart NetWorker services on the client.

Manual backups using save command fail when performed on Windows remote client from non-root user account

NW124240

Manual backups using the **save** command cannot be performed on Windows remote clients from a non-root user account. The error "User does not have sufficient backup privileges or is not administrator" appears.

SFR enabled backup not supported for NTFS partitions residing on IDE disks

NW124330

SFR enabled backup is not supported for NTFS partitions residing on IDE disks. When an SFR backup to IDE disks with NTFS partitions is attempted, the backup falls back to non-NTFS mode.

CLI problems and limitations

mminfo does not reset space usage after savegroup is aborted

NW122242

After staging a file type device, both NMC and the output for **mminfo -mv** display the incorrect volume size.

mminfo -mv and NMC show incorrect file type device (FTD) volume size after stage operation

NW124967

After staging a file type device, both NMC and the output for mminfo -mv display the incorrect volume size.

Cloning and staging problems and limitations

Recovery of a clone volume fails if the original backup was marked as suspect

NW123160

When recovery of a clone volume is performed, if the original backup tape for the clone was marked as suspect in NMC, the recovery fails.

Data Domain clone job records not flagged in jobsdb

NW120358

For Data Domain clone operations, the clone job record created in jobsdb does not contain a flag to distinguish the type of clone as a Data Domain clone.

Configuration problems and limitations

Java JRE 6 Update 29 and JRE 7 Update 1 compatibility issues with NMC in NetWorker 7.6 SP2 (fixed in NetWorker 7.6.2.7 and later)

NW134183 (esg125257)

JRE version 6 Update 29 (JRE 1.6.0_29) and JRE 7 Update 1 are not supported by NMC in NetWorker releases previous to NetWorker 7.6.2.7. NMC will not function correctly if these versions are installed.

Workaround

Update to NetWorker 7.6.2.7 or later.

Java JRE 6 Update 27 and JRE 7 compatibility issues with NMC in NetWorker releases previous to 7.6.2.5 Build 681

NW128816 (esg124036)

JRE version 6 Update 27 (JRE 1.6.0_27) or later and JRE 7 are not supported by NMC in NetWorker 7.6 SP2 Build 681 and earlier. NMC will not function correctly if these versions are installed.

Workaround

A fix is available in NetWorker 7.6.2.7 and later. If JRE version 6 Update 27 or JRE 7 is currently installed, update to NetWorker 7.6.2.7 or later.

HIST and UPDATE variables ignored during SMTape backup on Windows

NW129596

When backing up NetApp filers using Snapmirror-to-tape (SMTape) on Windows, the **HIST** and **UPDATE** variables are ignored in the client resource's Application Information attributes.

Remote access attribute for NetWorker client resource of the NetWorker server must list names of all cluster nodes to ensure lockbox functionality on NetWorker server's cluster node

NW127039

If a lockbox is created for a NetWorker server configured on a cluster, the following step must be performed in order for the lockbox to work on the cluster node the NetWorker server is running on:

- The **Host** section for the NetWorker client resource's remote access attribute must list the names of all the cluster nodes. The values of the names must be in the following form:

- For UNIX cluster nodes, use the hostname command output
- For Windows cluster nodes, use the full computer name (go to **Control Panel** › **System** › **Computer name** to get the full name)

Note: The lockbox can be created prior to or after performing this step.

This configuration must be performed during the initial startup of the virtual NetWorker server (that is, before the virtual server fails over to the other cluster). Otherwise, the lockbox will have to be deleted and then re-created.

Devices and media problems and limitations

Tape drives configured from EDL on HP-UX are not assigned unique serial numbers, leading to device ordering issue

LGTsc21701

When tape drives are configured from an EDL on the HP-UX platform, the tape drives are not assigned unique serial numbers. As a result, a device ordering issue occurs when running the jbconfig command.

Workaround

The EDL requires the following patch/update:

disklibraryupdate-dl1549upto18-SP05 and update-dl154922

Hardware Providers not supported for NetWorker client backup operations

The NetWorker client does not currently support hardware providers for backup operations. Only software providers are currently supported.

If you are using a hardware provider, perform one of the following workarounds as appropriate:

- Uninstall the hardware providers.
- Migrate any data that is backed up by the NetWorker client to a disk LUN (Logical Unit Number) that is not controlled by a hardware provider.

For example, suppose you have an application module, such as NMM, to back up a SQL server database, and you want to continue to back up the SQL databases with a hardware provider. To accomplish this, migrate the SQL software binaries and, if applicable, any operating system data or any regular filesystem data to a disk LUN that is not controlled by a hardware provider such as the C:\ drive. In this way, the application module can still use the hardware provider to backup the SQL databases, while all other data is backed up with a software provider.

Active read sessions limited to 1 when recovering data from a Data Domain device

NW127956

When recovering data from a Data Domain type device, the number of active read sessions will be limited to 1, regardless of the number of recovery sessions that are started, because the DD Boost library used with NetWorker 7.6 SP2 is not multi-threaded.

DD Archiver storage systems are limited to one data movement policy per NetWorker datazone by default

NW128111

Data Domain (DD) Archiver data movement policies are managed on an mtree basis. You can specify one data movement policy per mtree. All NetWorker Data Domain devices in a datazone back up to a single mtree on a DD Archiver storage system by default.

Workaround

You can create additional mtrees for a datazone manually by using the NetWorker Device Configuration Wizard and specifying a new top level folder in the **Select Folders to use as Devices** attribute.

Device Configuration wizard cannot be used to label CIFS share AFTD on a Data Domain system

NW125290

When a CIFS share AFTD is used on a Data Domain storage system, the device cannot be labeled using the Device Configuration wizard.

System error detected when labeling a Data Domain device

NW124165

A System error similar to the following is detected when attempting to label a Data Domain device:

```
nsrmm: No volume with name <volume> found in media database.
nsrmm: SYSTEM error: Data Domain disk
```

AFTD percentage capacity not updated after capacity is changed and device is relabeled

NW120013

After changing the % capacity of an AFTD and relabelling the device, the % capacity is not updated to the new value. Running **mminfo -m** displays the % capacity prior to the relabelling.

Workaround

Delete the device and create a new device with the required capacity.

Data Domain features cannot be enabled through NMC on AIX 64-bit

NW123401

On an AIX 64-bit system, **libDDBoost** does not work. As a result, Data Domain features cannot be enabled through NMC, which is 64-bit on AIX.

Selecting AFTD on first window of Device Configuration wizard returns error

NW125024

Opening the Device Configuration wizard and selecting the **AFTD** radio button from the first window returns the following error message in the Java console:

```
!!!!Recieved client communication error = 1
```

NMC then becomes unresponsive and must be restarted.

GUI problems and limitations

NMC client browser OS and JRE Requirements table: Link to download JRE 1.6 on HP-UX has changed

The NMC client web interface provides vendor specific links to download the Java Runtime Environment (JRE) 1.6 if the JRE 1.6 is not already installed on the NMC client.

The URL for downloading JRE 1.6 on HP-UX has recently been changed by the vendor. The correct URL is now:
https://h20392.www2.hp.com/portal/swdepot/displayProductInfo.do?productNumber=HPUXJDKJRE60

Alert not displayed in NMC on the first day of evaluation license

NW122973

When NetWorker is installed using an evaluation license and NMC is started, NMC does not display an alert in the Monitoring tab indicating an evaluation license is being used. This problem only occurs on the first day of use; on subsequent days, this alert is displayed in NMC.

Drive letter marked in red in Recover browser if drive is not on proxy server

NW125853

In the NetWorker User program's Recover window, if a drive letter is not present on the server, the drive is highlighted with a red question mark.

Scan operation fails in NetWorker User when browse sessions are open for a client while the client's save set is being scanned into the NetWorker server

NW125786

If a client browser is open in the NetWorker User program, and index files exist for a backup that is being scanned in for the client on a Windows NetWorker server, the scan operation fails with errors similar to the following:

```
scanner: (ssid <number>) index error, store failed
```

```
scanner: error, Cannot unlink the existing key file before re-creating
   it. Error 'Permission denied'.
```

Workaround

Close any NetWorker User browse sessions that are open for the client whose save set is being scanned into the NetWorker server.

NMC may not display SNMP traps when traps are sent from Data Domain boxes running DDR OS 5.0 and multiple NICs are configured

NW125671

When SNMP traps are sent from a Data Domain box running DDR OS version 5.0 and multiple NICs are configured, SNMP picks up the IP address of the first available NIC, so any traps sent from the DDR will be encoded with that first NIC's IP address. If NetWorker expects to receive SNMP traffic from another NIC's IP, the SNMP traps will not display in NMC.

Help topic does not display for NetWorker Clone reports in NMC

NW123840

When selecting the Reports tab in NMC and clicking the on-screen help icon, a help topic does not display for Networker Clone reports.

Non-readable characters displayed in the NetWorker servers search in Winworkr

NW124145

A Winworkr NetWorker servers search displays non-readable characters in the in WinPE wizard.

Multiple browse sessions displayed in NMC during single step recovery

NW119577

During a single step recovery, multiple browse sessions will be displayed in the NetWorker Console Monitoring window. This is expected behavior.

Installation and upgrading problems and limitations

Glibc-locale-32bit package required on 64-bit SuSE Linux system to run NMC

NW129515

If you are running NMC on a 64-bit SuSe Linux system, the following package needs to be installed:

```
glibc-locale-32bit
```

NetWorker client does not recognize HomeBase path and Profiling fails if HomeBase Agent is installed manually

NW124476

During the NetWorker installation, if the HomeBase Agent 6.4.1 is installed manually, the NetWorker client does not recognize the HomeBase path after the installation. Upon configuring the client and starting a scheduled backup, Profiling fails with the error "nsrbmr ... error :‹Couldn't spawn hba.exe›".

Workaround

Restart the NetWorker services so that **nsrexecd** recognizes the HomeBase Agent installation. Profiling now completes successfully.

Changes to handling of the nwclust.pl script when upgrading to NetWorker 8.0 in an AutoStart 5.4 and later cluster

NW119766

Starting from release 5.4, AutoStartTM no longer provides the nwclust.pl script. The NetWorker 8.0 release includes the script, but since the location of the script has changed, the lcmap script needs to be updated to point to the new location if you are upgrading from a Networker version previous to NetWorker 7.6 SP2.

Workaround

Reconfigure the AutoStart cluster so that the generated lcmap script points to the correct location of the nwclust.pl script.

On UNIX:

1. Run **networker.cluster -r**.
2. Run **networker.cluster**.

On Windows:

1. Run **lc_config -r**.
2. Run **lc_config**.

More information on cluster configuration is provided in the *EMC NetWorker 7.6 Service Pack 2 Cluster Installation Guide*. The following example shows the generated lcmap script on Windows after the cluster configuration:

```
SET FT_DIR=C:\Program Files\EMC\AutoStart\eas54

SET FT_DOMAIN=eas54

"C:\Program Files\EMC\AutoStart\eas54\bin\ftPerl" "C:\Program
   Files\EMC NetWorker\nsr\bin\nwclust.pl"
```

Note: When performing a new installation of NetWorker 8.0, these steps for upgrading do not apply. Follow the instructions for performing a cluster install provided in the *EMC NetWorker 8.0 Cluster Installation Guide*.

Messaging problems and limitations

Warning message appears when starting NetWorker services on UNIX

NW122342

When starting NetWorker services on a UNIX system, a warning message appears if a random number generator (PRNGD) is not running on the host where nsrexecd is running.

Workaround

Install a random number generator if one does not already exist on the system.

To check if a PRNGD is running, run the following command on a UNIX system:

```
ps -ef | grep prng
```

An output similar to the following appears:

```
ganaps@bu-ffalo#bash2.03|~/cvs/nw_7_6_dev/dev/nsr/server> ps -ef |
   grep prng
    root   353     1  0   Sep 30 ?        4:18 /usr/local/sbin/prngd
   /var/run/egd-pool
```

Performance problems and limitations

Latency issues with media database operations

NW121129

When a large media database is under heavy load and **nsrim** is running in parallel, latency issues occur with media database operations. If several large savegroups are run in parallel with a large number of clients and/or savesets, the backups may seem to hang or take very long to complete. Other operations, such as **mminfo** or NMC/GUI commands that perform media database queries, will also hang or take long to respond if **nsrim** is crosschecking the media database at the same time.

The following common symptoms are observed:

- **nsrim -X** does not complete in a reasonable amount of time
- **nsrmmdbd** process consumes nearly 100% of the processor it is running on
- pstack of **nsrmmdbd** displays recalculate_vol_rmedia function
- Many save set clone instances on a volume have expired on the volume retention date.

Workaround

To fix this issue:

1. Download and install the latest Cumulative Fixes package for NetWorker 7.5 and 7.6 from the following locations:

   ftp://ftp.legato.com/pub/NetWorker/Cumulative_Hotfixes/7.5

   ftp://ftp.legato.com/pub/NetWorker/Cumulative_Hotfixes/7.6

2. Create a file called **mdb_no_recalc** under the /nsr/debug directory.

Creating the **/nsr/debug/mdb_no_recalc** file and installing the hot fix stops the volume retention recalculation during the crosscheck of the media database, thereby reducing the overall time media database crosschecking takes to complete. This is particularly useful for media databases that contain a large number of save set records per volume where many of the save sets in the volume(s) are expiring on the same day or at the same time.

Note: To check the status of a volume, the **volflags** reporting option in mminfo must be used instead of **volretent**.

Restore problems and limitations

Legacy System backups on NetWorker client for Windows 2003 and Windows 2000 cannot be recovered and are not removed from Avamar grid upon expiration

NW128138 (esg121409)

Deduplicated ASR backups of Legacy System save sets (SYSTEM STATE, SYSTEM DB AND SYSTEM FILES) performed on a Networker client for Windows 2003 (with **VSS:*=off**) or Windows 2000 are reported as successful in NMC, even though the backups are not correctly updated with the deduplication attributes. As a result, recovery of the Legacy System save set from the deduplication backup will fail.

Additionally, expired Legacy System save sets are not removed from the media database or the Avamar Grid, which may eventually cause the Avamar Grid to become full and move to read-only state.

Note: NetWorker client systems for Windows 2003 or 2000 that are configured to perform ASR backups will have **vss:*off** in the **save operation** field of the client properties in NMC.

The following error appears in the deduplication logs under nsr\dedup\logs\‹›:

```
Error: avtar Error <8841>: getting sfhead failed
```

Additionally, running the command **mminfo -s -q dedupe** on the NetWorker server returns the following deduplication attributes with no information:

```
Client path:
Data set size: ;
De-Dup session id: ;
De-Dup snapup time: ;
De-duplication: ;
De-duplication host: ;
Domain:;
New data on De-Dup Node: ;
New files: ;
Replication host: ;
Size on De-Dup Node: ;
```

Workaround

To ensure successful backup and recovery operations of Legacy deduplication save sets, EMC strongly recommends upgrading the NetWorker client to a version which includes a fix that prevents subsequent backups from encountering this issue.

For NetWorker 7.6.x, upgrade the NetWorker client to NetWorker 7.6 SP2 or later.

For NetWorker 7.5.x, upgrade the NetWorker client to NetWorker 7.5.4.4 or later.

Note: Additional information regarding the fixes contained in the 7.5.4 cumulative builds is provided in the NetWorker 7.5.x cumulative build document at http://powerlink.emc.com/km/live1/en_US/Offering_Basics/Articles_and_Announcements/NetWorker7_5_CumulativeHotFixes.pdf.

The latest cumulative fixes packages for NetWorker 7.5 and 7.6 can be downloaded from the following locations:

- ftp://ftp.legato.com/pub/NetWorker/Cumulative_Hotfixes/7.6
- ftp://ftp.legato.com/pub/NetWorker/Cumulative_Hotfixes/7.5

To manually clean up the expired legacy save sets on the Avamar grid, contact NetWorker Support.

Directed recovery to CIFS share on destination client is not supported

NW127028

Directed recovery does not work when the directory specified to relocate the files to on the destination client is a mapped CIFS share.

Bare Metal Recovery using HomeBase and a version of NetWorker different from the one used for backup may result in dll mismatch

NW126148

Performing a bare metal recovery using HomeBase and a version of NetWorker that is different from the one that was used for the backup may result in mismatched NetWorker DLLs. When this mismatch occurs, it is during the restore of the *‹Nw-installdir›*\EMC NetWorker\nsr folder.

Error messages similar to the following may appear upon subsequent use of NetWorker recover commands:

```
The procedure entry point setIsVcb could not be located in the dynamic
   link library LIBASM.DLL
```

Workaround

To avoid this issue, perform one of the following, listed in the preferred order:

- Always use the same version of NetWorker for the backup and the HomeBase recovery of a system.
- Ensure that the NetWorker installation volume (for example, C:\) is the last data drive recovered by HomeBase, occurring after the recovery of VSS system save sets and any other volumes. After the final recovery and restart of the system, the mismatch will be resolved.
- Create a HomeBase exclude entry for the *‹NW-installdir›*\EMC NetWorker\nsr folder. The HomeBase documentation provides more information on where and how to create this exclude information.

Disaster recovery logs display “recover completion time” for metadata recovery instead of indicating that recovery of metadata was successful or identifying this as “recovery of metadata completion time”

NW126007

In the disaster recovery logs from the NetWorker User program and the CLI, the recovery of metadata is displayed as “recover completion time” instead of indicating that the recovery of metadata was successful, or identifying that this is “recovery of metadata completion time”.

Empty file gets created after recovery fails due to incorrect passphrase

NW125168

When a file-level recovery fails due to incorrect passphrase entry, an empty file gets created in the destination specified for the recovery. This file can be deleted.

Security problems and limitations

EMC NetWorker Security Update for Apache HTTPD Range header DoS Vulnerability (fixed in NetWorker 7.6.2.6 and later)

NW133031 (ESA-2011-037)

The Apache web server version that ships with NetWorker versions previous to 7.6 SP2 build 689 contains a vulnerability in the byterange filter that could allow remote attackers to cause a denial of service (memory and CPU consumption) by way of a Range header that expresses multiple overlapping ranges. This vulnerability has been fixed in Apache web server 2.2.21. The following Apache advisory provides more details:

http://httpd.apache.org/security/CVE-2011-3192.txt

Workaround

EMC NetWorker 7.6.2.6 Cumulative build 689 contains a resolution for this issue. For details regarding all fixes included in this build refer to the NetWorker 7.6 Cumulative Hotfixes document at the following link:

http://powerlink.emc.com/km/live1/en_US/Offering_Basics/Articles_and_Announcements/NetWorker7_6_CumulativeHotFixes.pdf

EMC strongly recommends all customers upgrade at the earliest opportunity.

Details regarding other identified Apache web server vulnerabilities that might impact NMC are provided in the EMC Knowledgebase solution **esg111120** at the following link:

http://solutions.emc.com/emcsolutionview.asp?id=esg111120

Encryption attribute not set on encrypted folder after recovery

NW122275

If a folder has been encrypted in Windows, for example by selecting **Folder Properties › Advanced › Encrypt contents** to secure data, it will be recovered as encrypted. However, the encryption attribute will not be set on the folder. You can manually reset the encryption attribute after the Windows disaster recovery. This is a Microsoft limitation.

Volumes that are BitLocker encrypted will not be encrypted after recovery

NW123237

Windows disaster recovery can back up critical volumes that are BitLocker encrypted. However, the recovered volumes will not be encrypted. You can use the BitLocker icon in the Control Panel to re-apply the volume encryption. This is a Microsoft limitation.

VADP only supports English Windows operating systems for vCenter/Virtual Center and VADP proxy

NW129816

For NetWorker installed on Windows, VADP only supports English versions of the Windows operating systems for the vCenter or Virtual Center machine and the VADP proxy.

Note: NetWorker does support the backup/recovery of non-English versions of guest operating systems for the VMs.

Incorrect proxy information displayed in NMC for VM client resource after upgrading the NetWorker server to 7.6 SP2

NW129735

After upgrading the NetWorker server from 7.6 SP1 to 7.6 SP2, the VM client resource associated with the VCB proxy does not display the correct information in NMC. For example, if you are using both VADP and VCB proxies, VM client resources that are still associated with VCB proxies will display the VADP proxy when viewing the VM resource in NMC.

The correct information displays in the nsradmin output for the client resource.

Backup of a Windows 2003 VM is not browsable

NW129337

A VADP image-level backup of a Windows 2003 VM is not browsable if the VM was originally Windows 2000 and later when the guest operating system was upgraded to Windows 2003. The savegroup log displays the following message, even though all the attached disks are NTFS:

```
nsrvadp_save: Parser failed because of a non-NTFS volume inside the VM
```

Workaround

To browse these VADP backups, download and install the following Windows 2003 resource kit from Microsoft into the VM:

http://www.microsoft.com/downloads/en/details.aspx?familyid=9d467a69-57ff-4ae7-96ee-b18c4790cffd

Once installed, perform the following steps to create a junction point:

1. Open a command prompt in the VM.
2. In the command prompt, run **cd** to the **Tools** folder in the resource kit. By default, the Tools folder is located in C:\Program Files\Windows Resource Kits\Tools.
3. Enter **mkdir "C:\windows"** in the command prompt

4. Enter **linkd "c:\windows" "c:\winnt"** in the command prompt.
5. You can now confirm the junction point is created by running the following:

   ```
   cd \
   dir /a
   ```

   The output should display one entry indicating Junction, as in the following:

   ```
   05/28/2011  03:17 AM    <JUNCTION>    windows
   05/28/2011  02:23 AM    <DIR>          WINNT
   ```

6. After these steps have been performed, run a level 0 FULLVM backup of the VM and verify that it is browsable.

NMC does not display VMs when auto-discovery is run on Linux with vCenter 4.1 update 1

NW129041

When configuring the hypervisor resource and enabling auto-discovery in NMC on a NetWorker server for Linux with vCenter 4.1 update 1, the VMs do not display in NMC. This issue does not occur with vCenter 5.0.

Workaround

Update to vCenter 5.0.

Unable to browse guest based backups on non NTFS filesystem (applies to NetWorker 7.6.2.1 build 638 and later -- fixed in NetWorker 7.6 SP3)

NW129093

This issue applies to NetWorker releases 7.6.2.1 build 638 and later and is fixed in NetWorker 7.6 SP3 and later. Traditional guest based (client based) backups are not browsable in the recovery GUI for VMs that are running a non NTFS filesystem and that have a mix of VADP and guest based backups. This issue does not apply to Windows VMs that are using NTFS. Additionally, save set recoveries are not affected and can be performed in the usual way.

To work around the issue, run the following commands from a command line on the VADP proxy or the VM:

To find the backup time:

mminfo -av -s *networker_server* **-q "client=***virtual_client***"**

To perform the recovery:

recover -t *backup_time* **-s** *networker_server* **-c** *virtual_client*

Example The following VM (host name **mars**) has a mix of both VADP and traditional guest based backups. This example shows how to recover a traditional backup save set on the VM by first locating the time of the backup save set using the **mminfo** command and then by using that time with the **recover** command. The host name of the NetWorker server in this example is **jupiter**.

```
C:\mminfo -av -s jupiter -q "client=mars"
volume        type  client date time   size   ssid      fl lvl    name
kuma-1 Data Domain mars 5/24/2011 10:38:39 PM 281 MB 1658578527 cb full /root
kuma-1.RODData Domain mars 5/24/2011 10:38:39 PM 281 MB 1658578527 cb full /root
```

```
kuma-6 Data Domain mars 5/24/2011 10:59:22 PM 5243 MB 1440475890 cb full FULLVM
kuma-6.RO Data Domain mars 5/24/2011 10:59:22 PM 5243 MB 1440475890 cb full FULLVM
C:\recover -t "5/24/2011 10:38:39 PM" -s jupiter -c mars
```

Notice that in the previous example output from the **mminfo** command, the first two lines listed are for a traditional backup and the last two lines are for a VADP backup, which is denoted with the save set name, FULLVM. The *NetWorker Command Reference Guide* provides more information about using the **recover** command to mark (select) files and to perform the recovery.

Recovering non-Windows VMs that have a mix of VADP image-level and client-based backups (fixed in NetWorker 7.6.2.1 build 638 and later)

NW127928

The following considerations apply to NetWorker releases previous to 7.6.2.1 build 638 when recovering non-Windows VMs that have a mix of VADP image-level and client-based backups.

If using traditional NetWorker client-based backups along with VADP image-based backups for the same VM client, you must first remove the indices of the previous traditional save sets before perfoming an image-level recovery of the full virtual machine, otherwise the image-level recovery fails. The only indices that need to be removed are those indices of the traditional save sets whose backups were performed prior to the VADP image-level backup that is selected for restore.

Run the following command on the NetWorker server to mark the browsable save sets corresponding to the traditional backup as recoverable save sets.

nsrim -c *client_name* **-N** *traditional_saveset_name* **-l**

The last parameter in the command is a lower-case L.

This command removes the oldest full save and all dependant save sets from the online index. You may need to run the command multiple times for every level **FULL** browsable traditional saveset and for every traditional save set name.

After removing the indices, you can perform the image-level recovery using either the NetWorker User program or the command line.

Example For example, a Linux client **mars** has a mix of both VADP image-level and traditional backups as seen in the following output:

```
C:\>mminfo -avot -q "client=mars,volume=delve.001"
volumetypeclientdatetimesizessidfl lvlname
delve.001 adv_file mars 4/14/2011 9:55:55 AM 3483 MB 4154881857 cb full /usr
delve.001 adv_file mars 4/14/2011 10:01:35 PM 103 MB 3953675679 cb incr /usr
delve.001 adv_file mars 4/14/2011 10:07:10 AM 15 GB 4104550902 cb full FULLVM
delve.001 adv_file mars 4/14/2011 2:55:31 PM 3481 MB 4003904887 cb full /usr
delve.001 adv_file mars 4/14/2011 3:03:18 PM 103 MB 3903242058 cb incr /usr
delve.001 adv_file mars 4/14/2011 3:28:30 PM  15 GB 3852911942 cb full FULLVM
```

If you want to recover the latest image-level backup (in the above example, SSID=3852911942), first remove all the indices of browsable save sets that are from the previous traditional backups.

In this case, because there are two instances of browsable level **FULL** of the save set name **/usr** that need to be removed, the following command must be run twice on the NetWorker server:

```
nsrim -c mars -N /usr -l
```

If you want to recover from the second last image-level backup, (for example, from SSID=4104550902), first remove all the indices of browsable save sets which are from the previous traditional backups.

In this case, since there is one instance of browsable level **FULL** for the save set name **/usr** that needs to be removed, the following command must be run once on the NetWorker server:

```
nsrim -c mars -N /usr -l
```

Note: Browsable recovery of the traditional backup save sets will no longer be possible once the respective indices are removed. If the traditional backup indices are still needed, they can be restored once the image-level recovery is complete by running the following command on the NetWorker server:
`scanner -c` *client_name* `-i` *device_path*

For example: scanner -c mars -i c:\device2

Transport mode falls back to NBD mode when configured transport modes SAN or hotadd are not available on non-NTFS VMs

NW127589

When the transport mode is configured to **SAN** or **hotadd** for the proxy on a non-NTFS VM and these transport modes are not available, VDDK falls back to **NBD** mode, and no message is logged to indicate that the transport mode has been changed to **NBD**.

CBT tool does not return error when attempting to use with non-NTFS VMs

NW127651

The Changed Block Tracking (CBT) tool can only be used for incremental backups of NTFS VMs. However, the tool cannot determine whether the operating system in use is NTFS or non-NTFS. As a result, no error message is returned when CBT is enabled or disabled for non-NTFS VMs.

Non-NTFS thin disk VMs get restored as thick disk during disaster recover

NW127446

When NetWorker backs up a non-NTFS thin disk VM, both allocated sectors and unallocated sectors get backed up. As a result, upon disaster recovery of the thin disk VM, the thin disk is fully allocated, and is restored as thick disk.

FULLVM backup of a NTFS VADP client falls back to non-NTFS mode if the drive has an unformatted partition

NW127004

When performing a FULLVM backup of a NTFS VADP client, if the drive has an unformatted partition, the virtual machine falls back to non-NTFS mode and the index is not included in the backup.

The following errors appear in the savegroup output:

```
nsrvadp_save: Parser failed because of a non-NTFS volume inside the VM.
nsrvadp_save: Starting save operation of the non-NTFS Image.
```

VADP backup fails with VDDK error when specified transport mode is not available

NW126608

If the transport mode specified for VADP backup is not available at the time of backup (for example, if **SAN** mode is selected but the **SAN** connection becomes unavailable during the backup), then the backup fails with the following messages:

```
nsrvadp_save: The following internal error occurred: An error was
returned from nsrvddk.exe: Error opening disk

VDDK Error: You do not have access rights to this file
```

VM does not power on after disaster recovery of CBT-enabled backup

NW126553

Disaster recovery of a CBT-enabled backup completes successfully, however, the VM fails to power on after the recovery, displaying the following error:

```
the parent virtual disk has been modified since the child was created
```

Workaround

Ignore the error, then run the disaster recovery again from the same backup. When the recovery completes successfully, manually power on the VM.

NetWorker User program cannot be used for VADP recovery in non-English locale

NW126457

The NetWorker User program cannot be used for VADP recovery operations when launched from a non-English Windows machine.

Guest backups of Windows 2008 R2 and Windows 2007 may fail on ESX 4.0

NW126321

The VMware tools installer contains a program, **comreg.exe**, which has a Windows 2008 R2 bug that prevents it from registering the VMware Snapshot Provider with VSS. Guest backup of a Windows Server 2008 R2 or Windows 2007 guest may fail for certain versions of ESX 4.0.0 due to this issue.

Instructions for taking a manual snapshot with vCenter are provided at the following location:
http://kb.vmware.com/selfservice/microsites/search.do?language=en_US&cmd=displayKC&externalId=1022720

To resolve this issue, upgrade to ESX 4.0 update 2 or ESX 4.1, or to upgrade your ESX 4.0.0 server with a VMware patch, go to the following link:
http://kb.vmware.com/selfservice/microsites/search.do?cmd=displayKC&externalId=1013127

SYSTEM accounts must have Full Control permissions for all NTFS disks to back up Windows VMs

NW125927

For Windows VMs, image backups with file-level recovery enabled may not back up a folder if the folder does not have **Full Control** permissions for the **SYSTEM** user account.

Workaround

To work around this problem, ensure that all NTFS disks have **Full Control** permissions for the **SYSTEM** user account. To set these permissions:

1. Right-click an **NTFS** volume.
2. Select **Properties**.
3. Go to the **Security** tab and ensure **SYSTEM** account is listed and has been given **Full Control** permissions for the entire volume.

Virtual compatible raw disk restored as local virtual disk (fixed in NetWorker 8.0 SP1)

NW125800

When an image-level recovery of a VM is performed from what was initially a Virtual compatible raw disk (RDM) backup, the RDM disk is restored as a local virtual disk.

Using SAN transport mode results in slow performance for disaster recovery from physical proxy of VM with thin disks

NW125515, NW125130

When performing a disaster recovery from a physical proxy of a VM with thin virtual disks, the **SAN** transport mode should not be selected. Due to a VMware limitation, performance becomes very slow when using **SAN** mode, and the vCenter server receives many requests to "Clear lazy zero" and "Allocate blocks".

It is recommended to perform one of the following:

- Recover with a virtual proxy using the **hotadd** transport mode
- Recover from the physical proxy using **NBD** or **NBDSSL** mode

Recovery of a VM using SAN or hotadd transport mode requires policy be set to OnlineALL

NW125230, NW125142

When recovering a VM using either the **SAN** or **hotadd** transport mode, the following one-time configuration must be performed on the proxy host before initiating the recovery:

1. Open a command prompt on the proxy host.
2. Run the following command:

   ```
   DISKPART
   ```

3. Enter **SAN** and check for the SAN policy.

4. If the policy indicates **offline**, enable the policy by entering the following:

```
SAN POLICY=OnlineALL
```

You can now initiate the VM recovery using **SAN** or **hotadd** mode.

Note: If recovery is initiated from a Windows machine other than the proxy, these steps need to be performed on the machine where the recovery is initiated.

Savegroup output of VADP ALLVMFS backup still refers to VCB directive

NW125212

When performing an **ALLVMFS** backup, the savegroup output for the backup refers to VCB, indicating the “Directive is not VCB Directive for client ‹client name›”. The VCB directive is no longer valid and can be ignored.

“Release disk lease” messages appear during SAN mode backup

NW125179

During a SAN mode backup, several "Release disk lease" messages are logged under vCenter tasks, and appear after the “Create virtual machine snapshot” message. The “Release disk lease” messages can be ignored.

FULLVM level -0 backup must be performed after enabling CBT on the VM

NW125164

After enabling Changed block tracking (CBT) on the VM, run a FULLVM level -0 backup. Also, power on the system once for the change to take effect before running backups.

NetWorker uninstallation on VADP proxy host

NW125084

When the NetWorker client is uninstalled from the VADP proxy host, a prompt to reboot the system appears. If **No** is selected, and the client is reinstalled without rebooting the system, the VADP backups will fail with the following errors:

```
nsrvadp_save: Failed to start vStorage API driver service.
nsrvadp_save: Failed to Initialise LibVADP Context.
```

Workaround

If the NetWorker client is to be reinstalled on the same VADP proxy host, then a system reboot is required before performing a VADP backup or restore again.

Application information attributes for VADP backups should be added to all resources if multiple instances are created with the same proxy name

NW124883

If multiple instances are created with the same proxy name, then the application information attributes for the VADP backup should be added for all resources. For example, if Save Set ALL is created as the proxy and the proxy client has 3 instances (1 for ALLVMFS, 1 for FULLVM, and 1 with Save Set ALL), add **VADP_DISABLE_FLR=YES** in the application for each instance, then perform a full virtual machine backup.

NMC Client Configuration wizard allowing duplicate proxy clients to be created and configured on different mount points

NW124800

Incorrect behavior in NMC allows duplicate proxy clients pointing to the same vCenter server to be created using the NMC Client Backup Configuration wizard, and also allows these duplicate clients to be configured on different mount points.

Using hotadd transport mode to access a datastore directly attached to a remote ESX host may return VDDK error

NW124730

During VM backup or recovery, the following error message my appear if the transport mode **hotadd** is used to access a datastore that is directly attached to a remote ESX host:

```
VDDK Error: You do not have access rights to this file
```

Workaround

Perform one of the following:

- Use a proxy on the same ESX host as the DAS datastore, or
- Include **nbd** in the transport mode specification of the proxy

Temporary mnt folder gets created when recovering data from CBT-enabled VM backup

NW124431

When a VM file-level backup is performed with CBT enabled, during recovery a temporary folder (mnt) is created along with the restored data. This folder can be deleted.

vSphere Client cannot be launched from NMC for VMware Infrastructure Client 2.5

NW123719

When the vSphere Client is launched from NMC for VMware Infrastructure Client 2.5, login fails with the message “The requested operation is not implemented by the server”.

VADP backup may fail for VM name containing special characters

NW123164

If the name of the virtual machine to be backed up using VADP contains special characters, the backup may fail. For example, issues with the VM name have been encountered when the following special characters are used:

` ^ ~ = ; ! / ([ ] { } @ $ \ & # % +

The following links provide information on special characters to avoid when specifying the virtual machine name:

http://kb.vmware.com/selfservice/microsites/search.do?language=en_US&cmd=displayKC&externalId=1026469

http://communities.vmware.com/message/1597730

Progress messages display during VADP backup and recovery

NW123219

During VADP backup and recovery, several progress messages display related to snapshot creation or deletion, or registration of the virtual machine. For example, a backup displays the following messages in the savegroup logs:

```
Creating snapshot for 'vm-423' ...
 Task is -1% complete
 Task is 95% complete
 Task is -1% complete
SnapShot created Successfully for VM
```

These messages can be ignored.

Port ID does not get restored after disaster recovery of a VM originally connected to dvSwitch

NW123142

After performing a disaster recovery of a VM which was originally connected to dvSwitch, the port ID does not get restored as part of the dvSwitch configuration. As a result, the restored VM loses network connectivity.

Workaround

Prior to powering on the VM after the disaster recovery, assign a port ID that is not being used by any other VM.

VADP backup fails if Datastore name contains the characters % & = ?

NW122619

A VADP-based backup of a VM residing on a datastore fails if the datastore name contains the characters % & = or ?

Do not use these characters in the datastore name.

Restoring a VM back to vApp container fails with error “A specified parameter was not correct”

NW122586

When restoring a VM to the VMware vApp container on which it originally resided, the restore fails with the following error:

```
An error occurred for task 'RegisterVM_Task'.
Details: A specified parameter was not correct.
```

Workaround

Restore the VM to the root of the VC/ESX host, and then move the VM to the vApp container.

Client Configuration wizard cannot be used to configure default client as proxy if NetWorker server and proxy client are used on the same machine

NW122566

When the NetWorker server and proxy client are to be used on the same machine and the NetWorker server software is installed, there is no option to specify the client (which is created by default after the installation) as a proxy client using the Client Configuration wizard.

Workaround

In order to configure the client as a proxy client:

- Create a new client and configure this client as the proxy resource, then delete the default client resource (multiple instances of the proxy client are not supported), or
- Modify the client resource manually in the Application Information attributes of the proxy.

Web browser displays a 404 Not found or similar error the first time the vSphere client is run from NMC if the default port number of the Virtual Center server has been changed

NW122389

If the default http port of the Virtual Center server has been changed from port **80** to a different port number through the Virtual Center GUI (**Administration › VirtualCenter Management Server Configuration › Web Service › HTTP**), then the browser page that appears the first time the vSphere client is run from NMC on that machine will display a 404 Not found or similar error.

Workaround

To fix this issue, append the port number (preceded by a colon) to the URL in your browser and then refresh the browser. The correct web page then displays.

All save sets (NTFS and non-NTFS backups) marked as browsable

NW122381

All save sets are being marked as browsable, regardless of backup type (for example, NTFS or non-NTFS VM backup), even though the non-NTFS backups are not browsable.

Backup of VM on ESX 3.5 fails for VMs using short name

NW122197

VMware appends a dot (.) to all virtual machines with a short name. As a result, VC cannot find the exact VM, and backup of the VM fails with the following error:

```
nsrvadp_save: Unable to find the VM with IP / Name:
```

This problem only occurs on ESX version 3.5.

Incorrect warning message appears in Savegroup log file during non-NTFS backup of VM with independent persistent disk

NW122090

During a non-NTFS type backup of a VM with an independent persistent disk, a warning message appears in the savegroup log file, indicating that the size shrunk while saving. This warning message is incorrect and can be ignored

VM backup fails with HTTP Error 500 in cases where VM resides in a VMFS datastore which is shared by multiple ESX/ESXi hosts or in cases where the VM resides in HA/DRS Cluster setup

NW121958

When performing a backup of a VM which resides on VMFS datastore which is shared by multiple ESX/ESXi hosts or is in a HA/DRS Cluster setup, the backup fails with an HTTP Error 500 indicating the configuration file could not be downloaded.

Workaround

If the VC and ESX/ESXi version is 4.0, upgrade both the VC and ESX/ESXi server to 4.0 update 2 or later.

If the VC and ESX/ESXi version is 4.1, upgrade both the VC and ESX/ESXi server to 4.1 Update 1 or later.

Incremental backup of a VM with image-based backups

NW121168

For image-based backups, performing an incremental backup of a VM is not supported after a hardware change, OS patch update, Service Pack update, drivers update or other similar change has been made at the operating system or hardware level on the VM.

Perform a full image-level backup after every change made at the operating system and hardware level on the VM.

VADP_* and VCB_* application information attributes both supported for VADP implementation

NW121068

The new variables introduced with NetWorker 7.6 SP2 for VADP are not compatible with previous NetWorker releases. Therefore, the VCB_* appinfo variable that was introduced with NetWorker 7.6 is still supported with NetWorker 7.6 SP2.

VM cannot be restored to folder “Discovered Virtual Machine”

NW120474

There is currently no option to restore the VM to the folder **Discovered Virtual Machine**, which is the default folder created under each ESX server.

vSwitch becomes blank when performing disaster recovery of a VM to an ESX server different than the original server

NW120006

If a disaster recovery of a VM is performed to a different ESX server, and this ESX server has a virtual switch (vSwitch) that is different than the original ESX server, the recovery is performed with a blank vSwitch.

Workaround

Manually change the vSwitch to the one used with the current ESX server.

Improper error message appears when invalid datastore is specified during VADP restore

NW119897

If an invalid datastore is specified during VADP restore, a proper error message indicating an invalid datastore is not provided. Instead, a message similar to "Invalid datastore format '‹given datastore name›' may display.

Error messages for system related files appear during disaster recovery of a VM on Windows 2008

NW119729

During disaster recovery of a VM on a Windows 2008 system, several error messages similar to the following appear for system related files:

```
recover: Error in read of reference_C
```

These messages do not affect the recovery and can safely be ignored.

SSID recovery of incremental backup that has not changed since the last incremental backup results in second drive that is not needed being recovered

NW119040

When an incremental backup of a VM with two drives is run and there have been no changes made since the last incremental backup of the drives, during SSID recovery the second drive is unnecessarily recovered. Clicking on this second drive returns an error message.

networkr.raw output should be properly formatted

NW119468

When disaster recovery is performed using the NetWorker User program's Recover window, messages in the networkr.raw file output are not properly formatted.

Windows 2008 FULLVM backup displays warning messages in savegroup log even though backup is successful

NW119466

A FULLVM backup of a Windows 2008 32-bit or 64-bit VM from a Windows 2008 32-bit proxy displays warning messages in the savegroup log, even though the backup completes successfully.

Improper error message appears when disaster recovery run from command line without -o option

NW118840

A proper error message does not display when a disaster recovery is performed from the command line without the **-o** option. Instead, the error indicates that "The system cannot find the path specified".

VMs created in vCenter or folders created on proxy not cleaned up when recovery is stopped

NW118828

When a VM recovery operation in progress is stopped by the user or interrupted due to a network disconnection, VMs that were created in vCenter or folders created on the proxy are not cleaned up. The VM/folders must be manually deleted.

Remove snapshot operations are triggered when DR is started with winworkr or from the command line

NW118382

When a disaster recovery is started from the NetWorker User program (winworkr) or from the command line, Remove snapshot operations get triggered. The operation appears in the Recent tasks pane of the vSphere Client GUI.

Windows support problems and limitations

VSS SYSTEM FILESET save set may fail to back up the boot configuration data properly

NW127613

VSS SYSTEM FILESET save set backup may fail to back up the boot configuration data (BCD) properly. If VSS SYSTEM FILESET encounters this problem, the backup fails and error messages similar to the following appear in the log file:

```
VSS SYSTEM FILESET:\ VSS BCD BOOT FILES - ERROR: VSS failed to get
   mapping info for E:\Boot\, vsserror=0x1: Incorrect function

VSS SYSTEM FILESET:\ VSS BCD BOOT FILES - ERROR: Aborting backup of
   saveset VSS SYSTEM FILESET: because of the error with writer VSS BCD
   BOOT FILES.
```

This problem occurs if NetWorker cannot correctly identify the partition (volume) that contains the BCD.

Workaround

The inability to identify the BCD partition can be related to a system with multiple partitions labeled as “active” partitions by the Windows operating system. If there is only a single active volume, the problem should not occur.

Using Windows Disk Management, check the status information of the volumes. If there are multiple “active” volumes, then determine if more than one partition requires that status; if possible, remove the “active” designation from all partitions except your active system volume (the volume that contains the bootmgr and the Boot directory with the BCD file for the running instance of the operating system).

IMPORTANT

Ensure that caution is used if removing the “active” designation, since changing an active partition can make your system unbootable. The system may not start up if the partition marked as active does not contain the Windows boot files (or the boot files for another operating system). If it is not possible to determine the correct active partition or to reduce the active partition designation to only one, contact EMC NetWorker Support for assistance.

DISASTER_RECOVERY save set may fail to back up the BCD properly

NW127617

DISASTER_RECOVERY save set backup may fail to back up the boot configuration data (BCD) properly. If DISASTER_RECOVERY encounters this problem, the backup fails and an error message similar to the following appears in the log file:

```
VSS SYSTEM BOOT: No such file or directory
```

This problem occurs if NetWorker cannot correctly identify the partition (volume) that contains the BCD.

Workaround

The inability to identify the BCD partition can be related to a system with multiple partitions labeled as “active” partitions by the Windows operating system. If there is only a single active volume, the problem should not occur.

Using Windows Disk Management, check the status information of the volumes. If there are multiple “active” volumes, then determine if more than one partition requires that status; if possible, remove the “active” designation from all partitions except your active system volume.

IMPORTANT

Ensure that caution is used if removing the “active” designation, since changing an active partition can make your system unbootable. The system may not start up if the partition marked as active does not contain the Windows boot files (or the boot files for another operating system).
If it is not possible to determine the correct active partition or to reduce the active partition designation to only one volume, contact EMC NetWorker Support for assistance.

You may be able to determine the correct active partition or reduce the active partition designation to only one volume by manually mounting the BCD partition and then performing a DISASTER_RECOVERY backup.

Windows disaster recovery offline restore logs may be temporarily unavailable for browsing

NW126617

By default, the Windows disaster recovery WinPE image is set to Pacific Standard Time (PST). You may temporarily be unable to browse and recover the Offline Restore Logs save set if your local time is earlier than PST time. For example, if your local time is PST plus two hours, then the Offline Restore Log save set would not be available for recovery by browsing until the two hours have elapsed.

Windows Disaster recovery may fail if target system has more disks than the original system

NW123457

When performing a Windows disaster recovery, if the target system for recovery has more disks than the system originally used for backup, the recovery may fail.

Workaround

From the **System Recovery Summary** window, click **Options** and insert **-p** in the **Additional Options:** field.

Save set consolidation not supported for Data Domain devices configured on Windows 2008

NW124548

Save set consolidation is not supported on a Windows 2008 system that is configured with Data Domain devices.

Resource pool path uses forward slash for path separator instead of backward slash

NW121933

When specifying the resource pool path for a disaster recovery, the path uses a forward slash as the path separator instead of a backward slash. For example, if there is a resource pool hierarchy where resource pool2 exists within resource pool1, you must use a forward slash as path separator (for example, resource pool1/resource pool2).

NetWorker 7.6 Service Pack 1

Table on page 86 identifies problem issues and limitations discovered in NetWorker 7.6. Service Pack 1.

The known limitations are separated into the following categories:

- "Backup problems and limitations" on page 88
- "CLI problems and limitations" on page 91
- "Cloning and Staging problems and limitations" on page 92
- "Configuration problems and limitations" on page 96
- "Devices and media problems and limitations" on page 98

- "GUI problems and limitations" on page 100
- "Installation and upgrading problems and limitations" on page 102
- "Restore problems and limitations" on page 102
- "Security problems and limitations" on page 104
- "VMware Consolidated Backup (VCB) problems and limitations" on page 104

Known limitations related to internationalization support in NetWorker 7.6 are provided in the section "Internationalization support" on page 199.

Table 15 Limitations discovered in NetWorker release 7.6 Service Pack 1 (page 1 of 3)

Issue number	Description of limitation	Operating system affected	Product feature
"NW121944" on page 88	NDMP DSA backup of NAS filer or SnapImage client fails with error "could not establish jobid with server"	All	Backup
"NW120918" on page 89	File-by-file recovery of a DSA backup from Data Domain device fails	All	Backup
"NW120421" on page 89	For BMR-enabled Windows NetWorker clients, generating profile information using HomeBase Agent 6.4 fails	Windows	Backup
"NW120031" on page 90	Glibc 2.3.4 or later required on Linux host in order to run as storage node for Data Domain device	Linux	Backup
"NW117892" on page 90	nsrmmd may consume large amount of memory when backing up to Data Domain device by way of the storage node	All	Backup
"NW114817" on page 90	Savegroup with customized backups script fails	UNIX	Backup
"NW104883" on page 90	Cloud backup devices and partial save sets	All	Backup
"NW121894" on page 91	nsrclone with -d option ignored when used to specify destination storage node for writing save sets or when target clone pool has media type required=DD	All	CLI
"NW118223" on page 91	Scanner -i does not rebuild media indices	All	CLI
"NW118064" on page 91	AFTD capacity displayed in kb instead of % in output for mminfo -m	All	CLI
"NW114937" on page 92	nsrls -m option may not list media database statistics	Linux	CLI
"NW119530" on page 92	Path-to-tape: when spanned save set is cloned from media type with smaller block size to media type with larger block size, recovery from media type with larger block size fails	All	Cloning and Staging
"NW119156" on page 92	Cloning fails when Data Domain or NDMP save set of a client is encountered and there is no client resource on the NetWorker server	All	Cloning and Staging
"NW118255" on page 93	Device status continues to display as "active" after cloning operation terminated	WIndows	Cloning and Staging
"NW118893" on page 93	Clone controlled replication with nsrclone may revert to a regular clone if the NetWorker server's primary host name is not specified	All	Cloning and Staging

Table 15 Limitations discovered in NetWorker release 7.6 Service Pack 1 (page 2 of 3)

Issue number	Description of limitation	Operating system affected	Product feature
"NW117750" on page 94	nsrclone/nsrstage performs regular clone for source Data Domain volume on remote storage node if client resource was not created in NetWorker server	Linux	Cloning and Staging
"NW117470" on page 94	Concurrent stage with stage or clone from the same Data Domain device or AFTD is not supported	Linux	Cloning and Staging
"NW117179" on page 94	A regular volume clone operation hangs if the source volume is on a remote storage node and it is unmounted initially but is mounted after the clone attempts to start	Linux	Cloning and Staging
"NW117137" on page 95	Clone controlled replication (optimized clone) for Data Domain device is only performed when DD clone volume is mounted and available for writing	Solaris, Windows	Cloning and Staging
"NW116696" on page 95	When cloning a mix of save sets from different source devices such as Data Domain, AFTD, and NDMP devices, the same clone target volume may not be used for all save sets	Windows	Cloning and Staging
"NW115417" on page 95	Clone jobs may time out and not complete if 30 or more are scheduled to occur at the same time	Windows	Cloning and Staging
"LGTsc31596" on page 96	Path-to-tape cloning of save sets spanning across multiple volumes with different block sizes fails	All	Cloning and Staging
"NW123374" on page 96	NetWorker does not support IPMP feature on Solaris 10	Solaris	Configuration
"NW120856" on page 96	Data Domain host name must be specified in Device access information attribute when configuring Data Domain devices	All	Configuration
"NW120373" on page 96	NetWorker and device operations can fail when TCP Chimney is enabled for NICs on Windows Server 2003 or Windows 2008 R2	Windows	Configuration
"NW117057" on page 97	Failure reported during disaster recovery of VSS SYSTEM BOOT; set NSR_RECOV_TEMP_CLEANUP variable	Windows	Configuration
"NW114428" on page 97	Incremental backup failure may occur due to number of VSS shadow copies; set NSR_VSS_WAIT_INTERVALS variable	Windows	Configuration
"NW114157" on page 98	Unable to restore/clone data from tape written on a Linux Storage Node device when using persistent device names	Linux	Devices and Media
"NW120540" on page 99	Labelling a Data Domain device to a new pool when the device contains data belonging to a different pool can result in data loss	All	Devices and Media
"NW118590" on page 99	Labelling a Data Domain device fails after converting the device from AFTD to Data Domain	All	Devices and Media
"NW120536" on page 100	Username/password validation may fail using NMC New Device wizard for file system browsing if storage node is UNIX	UNIX	GUI
"NW120324" on page 100	Data Domain systems do not display in NMC Enterprise window or NetWorker Administration Devices window upon reinstalling NMC after complete uninstall	All	GUI
"NW118886" on page 101	Monitoring of SNMP events for Data Domain not available on HP-UX	HP-UX	GUI
"NW115920" on page 101	NSR clone resources that are created with the nsradmin program cannot be edited as scheduled resources in the GUI	Windows	GUI

Table 15 Limitations discovered in NetWorker release 7.6 Service Pack 1 (page 3 of 3)

Issue number	Description of limitation	Operating system affected	Product feature
"NW124547" on page 102	HomeBase Agent 6.2.1 does not automatically install as part of NetWorker Client installation on Red Hat Enterprise Linux 5.5 and later	Linux	Installation or Upgrading
"NW119766" on page 102	nwclust.pl script must be copied to AutoStart binary installation directory if using NetWorker in AutoStart 5.4 or later cluster environment	All	Installation or Upgrading
"NW119115" on page 103	Remote cluster services not started after Authoritative Restore of MSCS cluster database	Windows	Restore
"NW116575" on page 103	Bootmgr file deleted upon recovery of C:\directory with VSS System save set selected	Windows	Restore
"NW115372" on page 103	NDMP: recover or nsrndmp_recover displays debug messages during DSA recover on Windows even though recover is successful	Windows	Restore
"NW118106" on page 104	VCB topology map shows Helper VM for hotadd mode is associated with same group used for hotadd proxy	Windows	VCB
"NW117233" on page 105	Single Step recovery of VM within a vApp fails with P2V error	Windows	VCB
"NW117714" on page 105	Single Step recovery of Windows 2008 x64 VM fails with P2V error	Windows	VCB
"NW118197" on page 105	PVSCSI controller changes to BusLogic controller, leading to boot failure for x64 VMs and performance issues for x86 VMs	Windows	VCB
"NW118200" on page 105	SSR disaster recovery of SuSE Linux Enterprise Server 11 VM fails with P2V error	Windows	VCB
"NW118486" on page 106	Vmxnet3 adapter changes to e1000 adapter during VM recovery	Windows	VCB
"NW113740" on page 106	NetWorker cannot use mapped drive for VCB mount point	Windows	VCB

Backup problems and limitations

NDMP DSA backup of NAS filer or SnapImage client fails with error "could not establish jobid with server"

NW121944

When performing an NDMP DSA backup of a NAS filer or SnapImage client, either by running **savegrp** from the command line or from NMC (manual or scheduled savegroup), the backup fails with the error "could not establish jobid with server"; **nsrdsa_save** core dumps on UNIX servers and generates a memory dump on Windows servers.

Workaround

A hotfix is available for NetWorker 7.6 SP1. Perform the following steps to install the hotfix.

On UNIX:

1. Go to ftp.legato.com/pub/NetWorker/Updates/NW121944/7.6.1/7.6.1/and download the appropriate fix for the NetWorker server platform.

2. Stop the NetWorker daemons when no backup or recovery operations are in progress (from the command line, run **nsr_shutdown**).
3. Rename the current **nsrdsa_save** file (located in /usr/sbin by default), making note of the file permissions.
4. Copy the downloaded **nsrdsa_save** binary to the location of the original **nsrdsa_save** file. If required, set the file permissions on the new **nsrndsa_save** binary to match those of the original.
5. Start the NetWorker daemons on the NetWorker server (from the command line, **networker start**).

On Windows:

1. Go to ftp.legato.com/pub/NetWorker/Updates/NW121944/7.6.1/7.6.1/ and download the appropriate fix for the NetWorker server platform.
2. Stop the NetWorker Remote Exec Services when no backup or recovery operations are in progress.
3. Rename the current **nsrdsa_save.exe** file (located in C:\Programs Files\EMC NetWorker\nsr\bin by default).
4. Copy the downloaded **nsrdsa_save.exe** binary to the location of the original **nsrdsa_save.exe** file.
5. Start the NetWorker Backup and Recovery service. This will also start the NetWorker Remote Exec service.

File-by-file recovery of a DSA backup from Data Domain device fails

NW120918

Performing a file-by-file recovery of a DSA backup from a Data Domain device fails with an error similar to the following:

```
nsrndmp_recover: NDMP Service Warning: These files were not restored
```

Workaround

Change the recover mode from client DFA to mmd by creating an empty file named **nodirectfile** in the following location on UNIX or Windows:

- UNIX: /nsr/debug/nodirectfile
- Windows: %NW INSTALL Directory%\nsr\debug\nodirectfile

For BMR-enabled Windows NetWorker clients, generating profile information using HomeBase Agent 6.4 fails

NW120421

For Windows NetWorker clients, if HomeBase Agent version 6.4 has been installed and you have enabled BMR profiling on the NetWorker client, profiling generation fails with an error similar to the following:

```
HBA: 'hba.bat' is not recognized as an internal or external command
```

Workaround

Manually create a **hba.bat** file in the same directory where **hba.exe** is located. The file should contain the following lines:

```
@echo off
hba.exe %*
```

Glibc 2.3.4 or later required on Linux host in order to run as storage node for Data Domain device

NW120031

A **glibc 2.3.4** or later library is required by **libDDBoost.so** to initialize the DDCL library on supported Linux systems such as SuSE Linux version 9. If a version earlier than **glibc 2.3.4** is installed on the Linux system, the system will not be able to run as a storage node for the Data Domain device.

nsrmmd may consume large amount of memory when backing up to Data Domain device by way of the storage node

NW117892

When backing up to a Data Domain device by way of the storage node, **nsrmmd** consumes a large amount of memory and does not release the memory, even when the backup is no longer running.

Savegroup with customized backups script fails

NW114817

When a savegroup is run with a customized backup script, the savegroup fails.

Workaround

On HP-UX, instead of using the posix shell (/bin/sh) for customized backup scripts to be automatically started by the savegroup, use the korn shell (/bin/ksh).

Cloud backup devices and partial save sets

NW104883

By default, the CheckPoint restart feature does not support cloud backup devices because partial save sets are not retained on cloud backup devices.

Workaround

When the cloud backup device is used as a backup device for a Checkpoint restart, on the **Server Properties** menu, enable the **Keep Incomplete Backups** attribute. If the **Keep Incomplete Backups** attribute is not enabled, the NetWorker software will not keep the partial save sets.

CLI problems and limitations

Running nsrclone with -d option ignored when used to specify destination storage node for writing save sets or when target clone pool has media type required=DD

NW121894

The **nsrclone** command is ignored when used with the **-d** option to set the destination storage node for writing save sets, or to set the destination storage node if the target clone pool has its selection criteria set to **media type required=Data Domain**.

For example, when running **nsrclone -vvv -d scip2b131 -b DDclone -S** *‹ssid›* where the server is **scip2d14** and the target pool is **DDclone**, if the target pool's selection critiera is **media type required=Data Domain**, save sets are written to a volume in DDclone on the server scip2d14 instead of the storage node scip2b131, as was specified in the command line.

Workaround

Use the Devices tab of NMC to specify the destination storage node at **Devices › Storage Nodes** , then right-click the storage node and select **Properties**. The properties for Clone storage nodes are specified under **Configuration**.

Scanner -i does not rebuild media indices

NW118223

Running **scanner -i** *‹device›* does not rebuild the media indices from the volumes read.

Workaround

To rebuild the media indices:

1. Prior to running **scanner -i**, run **scanner -m** *‹device›*.
2. Run **scanner -i** *‹device›*.
3. Synchronize the media database and indices by running **nsrim -X**.

AFTD capacity displayed in kb instead of % in output for mminfo -m

NW118064

When **mminfo -m** is run and the AFTD percentage capacity restriction is in use, AFTD capacity does not display as a percentage in the output. Instead, the output displays device capacity in kb.

For example, if AFTD capacity was set to 98% as in the following example, an output similar to the following appears:

```
bash-2.05# mminfo -m
   state volume      written  (%)  expires     read mounts capacity
   pep.talisman.com.003    0 KB   0%     undef    0 KB     2     98 KB
```

nsrls -m option may not list media database statistics

NW114937

When using the **nsrls -m** option to print media database information, statistics of the NetWorker media database may not be listed.

Workaround

If **nsrls -m** does not list the media database sizing status, stop and restart the NetWorker services and then run **nsrls -m** again.

Cloning and Staging problems and limitations

Path-to-tape cloning only supported for media types with the same device block size and device file size

NW119530

When a save set is cloned from a media type with a block size that is different from the destination media type, recovery from the clone volume to the destination volume fails with an error message similar to the following:

```
recover: Unable to read checksum from save stream

recover: Encountered an error recovering <filename>

recover: Error encountered by NSR server `scip2d.lss.emc.com': Bad or
   missing record in save set <save set ID>, lost <# bytes> bytes
   starting at offset <# bytes>.
```

Workaround

Clone the path-to-tape save set to a media type that has the same device block size and device file size.

To check the block size of a labelled volume, open the **Device Properties** dialog box and check the volume block size in the **Volume** tab.

If the block sizes are different, do the following:

1. Go to the **Device Properties › Advanced** tab and change the **Device Block Size** attribute so that the source and destination volume block sizes match.
2. Relabel the volumes so that the new block sizes take effect.

IMPORTANT

If you need to configure the device file size of a device, do so with caution. If the device file size and the actual file size do not match, you may not be able to recover the resulting clone image.

Cloning fails when Data Domain or NDMP save set of a client is encountered and there is no client resource on the NetWorker server

NW119156

A clone operation fails when a Data Domain or NDMP save set of a client is encountered and there is no resource defined for that client on the NetWorker server.

Workaround

Create a client resource on the NetWorker server.

Device status continues to display as “active” after cloning operation terminated

NW118255

When a cloning operation is terminated by way of the **nsrmmd** process being stopped, the status of the device used for the operation continues to display as active in NMC.

Workaround

Refreshing the NMC browser results in the correct status being displayed.

Clone controlled replication with nsrclone may revert to a regular clone if the NetWorker server’s primary host name is not specified

NW118893

When performing clone controlled replication by using the **nsrclone** command, ensure that any NetWorker server alias names are set up correctly. Otherwise, the clone controlled replication operation may revert to a regular clone operation. This situation can occur when invoking the **nsrclone** command on a host that is not the NetWorker server.

For example, suppose that the following command is invoked on a remote storage node, that is, a storage node that is not on the NetWorker server host:

```
nsrclone -s mars -vvv -S saveset_id
```

where **mars** is an alias for the NetWorker server’s primary hostname, **ersat2d049**. In this example, a regular clone operation may be performed instead of a clone controlled replication operation.

Workaround

To avoid this situation, perform one of two things:

- Invoke the nsrclone command with the primary hostname of the NetWorker server. For the previous example, the command would be:

  ```
  nsrclone -s ersat2d049 -vvv -S saveset_ID
  ```

- Ensure that the alias hostname for the NetWorker server is specified in the Aliases attribute of the NetWorker server’s client resource. For the previous example, you would add the name mars to the Aliases attribute of the NetWorker client resource named ersat2d049. When this is done, you can invoke the nsrclone command as follows:

  ```
  nsrclone -s mars -vvv -S saveset_id
  ```

nsrclone/nsrstage performs regular clone for source Data Domain volume on remote storage node if client resource was not created in NetWorker server

NW117750

If a client resource for the remote storage node is not created in the NetWorker server, running nsrclone/nsrstage always performs a regular clone for the source Data Domain volume on the remote storage node.

Workaround

In order for the NetWorker server to manage and monitor clone operations, the NetWorker storage nodes, at both the source and target locations, must be clients of the same NetWorker server. A clone may not be created in a different datazone.

Create or add a client resource for the remote storage node in the NetWorker server.

Concurrent stage with stage or clone from the same Data Domain device or AFTD is not supported

NW117470

Performing a concurrent stage with the stage or clone from the read-only and read-write volume of the same Data Domain device or AFTD is not supported. If this is attempted, an ansrd core dump may occur.

A clone operation hangs if the source volume is on a remote storage node and is umounted initially but is mounted after the clone attempts to start

NW117179

If the source volume is on a remote storage node and is unmounted, starting a clone operation will not complete successfully even if the source volume is mounted after the clone operation attempts to start. The clone program **nsrclone** will hang with the following message:

```
Server <server_name> busy, wait 30 seconds and retry
```

This issue does not occur if the storage node is on the NetWorker server, that is, when the storage node is not remote. However, if you do not set **Media type required** to **Data Domain** in the target Backup Clone pool, a regular clone operation will be performed even if the source is a Data Domain volume.

Workaround

Ensure the source volumes to clone are mounted and the target volume is available for writing before initiating the clone operation, then set **Media type required** to **Data Domain** in the Backup Clone type pool for the clone's target device, making sure to specify that this pool is the target for the clone operation.

Clone controlled replication (optimized clone) for a Data Domain Device is performed only when the Data Domain clone volume is mounted and available for writing

NW117137

When performing a clone controlled replication operation (optimized clone) from one Data Domain device to another Data Domain device, ensure that the Data Domain clone volume is mounted prior to initiating the clone operation. If the Data Domain clone volume is not mounted and the clone operation is initiated, then a regular clone operation will be triggered instead of a clone controlled replication operation.

Workaround

There is a new pool attribute, **Media type required**, that when set will trigger an optimized clone on the target Data Domain device:

1. Set up a clone pool and assign only Data Domain devices to this pool.
2. Set the **Media type required** attribute in the Pool resource to **Data Domain**.

Note: It is especially important to set this new attribute when using clone controlled replication over WAN, so that the clone operation never falls back to regular cloning over a long distance network.

When cloning a mix of save sets from different source devices such as Data Domain, AFTD, and NDMP devices, the same clone target volume may not be used for all save sets

NW116696

Clone operations that mix save sets from different source devices such as Data Domain devices, AFTD devices, or NDMP devices, may be written to different target volumes. Although this behavior is by design, you may prefer to write all save sets in the clone operation to the same clone volume.

Workaround

If the clone operation includes save sets from different devices and you want all save sets to be written to the same volume, include only one volume in the clone target pool.

Clone jobs may time out and not complete if 30 or more are scheduled to occur at the same time

NW115417

Scheduling multiple clone jobs (30 or more) to occur at the same time may result in some clone jobs timing out and not completing.

Workaround

Do not schedule more than 30 clone jobs to occur at the same time.

Path-to-tape cloning of save sets spanning across multiple volumes with different block sizes fails

LGTsc31596

NDMP path-to-tape cloning fails if the source save set resides on multiple volumes with different block sizes. For example, when backup is performed using one LTO4 and one LTO2 volume, the cloning fails with the following error message:

```
"Error - Current NDMP session's block size 65536 does not match with
   new volume's block size 131072".
```

If performing path-to-tape cloning, save sets should be backed up on similar volumes.

Configuration problems and limitations

NetWorker does not support IPMP feature on Solaris 10

NW123374

When running NetWorker on the Solaris 10 operating system, EMC recommends not enabling the IPMP feature, which is disabled by default. When IPMP is enabled on a host, NetWorker may not be able resolve the host, resulting in server-side operations failing to execute, or executing on the wrong host.

Data Domain host name must be specified in Device access information attribute when configuring Data Domain devices

NW120856

When configuring Data Domain devices, do not specify an IP address in the Device attribute **Device access information** when multiple NICs are enabled on the Data Domain system. Instead, specify the Data Domain system host name for this attribute.

Note: A Data Domain license is required for each IP address used. It is recommended to use only one NIC per NetWorker datazone.

NetWorker and device operations can fail when TCP Chimney is enabled for NICs on Windows Server 2003 or Windows 2008 R2

NW120373

RPC errors can occur with some combinations of **TCP Chimney** and the NIC driver when **TCP Chimney** is enabled for NICs in a Windows Server 2003 or Windows 2008 R2 environment, leading to failed connections. The TCP Chimney feature was introduced in the Windows Server 2003 Scalable Networking Pack, and is enabled by default for that release.

This issue can cause a failure of the following NetWorker and device operations:

- Scheduled and manual savegroups can fail, with manual savegroups reporting the error “Lost connection to server, exiting”.
- Device connections can fail with the error “Lost media database connection”.
- Device operations can fail with the error “RPC send operation failed”, along with a more specific explanation such as “Broken pipe” or “Connection reset by peer”, among others.

Workaround

To work around this issue:

1. Disable TCP chimney by running the following command:

   ```
   netsh int tcp set global chimney=disabled
   ```

2. Restart NetWorker services.

More information related to this issue is provided in the following knowledgebase articles:

- http://support.microsoft.com/kb/942861
- http://support.microsoft.com/kb/945977
- http://social.technet.microsoft.com/forums/en-US/winservergen/thread/8a72f5d6-6f09-498a-b1a8-bcede2bfeecd
- http://communities.vmware.com/thread/91454?tstart=0&start=195

Failure reported during disaster recovery of VSS SYSTEM BOOT; set NSR_RECOV_TEMP_CLEANUP variable

NW117057

When performing a disaster recovery in multiple Windows platforms and copying the registry, a failure may be reported during the recovery of VSS SYSTEM BOOT due to the size of the **PendingRenameFileOperations** registry value, which is populated during the disaster recovery. The error message indicates a lack of system resources.

If this error appears, it is recommended to restart the disaster recovery after setting the environment variable **NSR_RECOV_TEMP_CLEANUP** to an appropriate value (for example, 1) in the system space. Setting this variable ensures that the above error does not appear, and that the recovery and subsequent cleanup of the temporary recover files after reboot occur without this interruption.

Incremental backup failure may occur due to number of VSS shadow copies; set NSR_VSS_WAIT_INTERVALS variable

NW114428

Incremental backups may fail due to the number of VSS shadow copies that are created and released by Windows when a backup is performed. A new environment variable, NSR_VSS_WAIT_INTERVALS, has been introduced to resolve the issue if a failure occurs. The syntax of the variable is as follows:

NSR_VSS_WAIT_INTERVALS=*<Mutex wait in mins>*,*<Snap attempt wait time in seconds>*

where *<Mutex wait in mins>* is the timeout interval that a save instance waits until requesting a snapshot to the VSS framework. The recommended value in case of a failure is **30**.

<Snap attempt wait time in seconds> is the time interval that occurs between successive snapshot requests being sent to the VSS framework. The recommended value in case of a failure is **5**.

If the problem persists, higher values for both the parameters can be set.

Devices and media problems and limitations

NetWorker may become unresponsive when performing label operations with NetWorker Data Domain Deduplication Devices

NW122429

NetWorker may fail and become unresponsive when attempting to label Data Domain devices. This situation can occur if the NetWorker Data Domain device resource is created on a host that is running a Pentium 3 or lower processor. The first symptom is most likely to be an error message generated during the attempt to label the device. The message looks similar to the following:

```
nsrmm: error, Cannot find an available nsrmmd service for operation on
   device <device_name>.
```

Workaround

If the NetWorker storage node host is running on a supported Intel 32-bit or 64-bit platform, ensure that the processor is a Pentium 4 or later.

Unable to restore/clone data from tape written on a Linux Storage Node device when using persistent device names

NW114157

If using Linux persistent naming (udev) and NetWorker CDI is enabled for the device, there is a potential to overwrite data when NetWorker positions the tape to perform a write operation. Most often this would occur if a partially full tape was mounted for writing and data was appended to it. This should not occur if data was continuously written to the device and the tape was filled.

Workaround

A fix is available for this issue (NW114157) for Linux storage nodes using tape devices configured with symbolic links (for example, /dev/rkant1 -> /dev/nst0) or tape devices configured with udev (for example, /dev/by-id/dev-name).

For storage nodes running NetWorker 7.4.5.6 and earlier, update to the latest cumulative build for NetWorker 7.5.x or 7.6. Links to the download are provided below.

For storage nodes running 7.5.2.3 and earlier, update to the latest cumulative build for NetWorker 7.5 Service Pack 3:

- ftp://ftp.legato.com/pub/NetWorker/Cumulative_Hotfixes/7.5

For storage nodes running NetWorker 7.6, update to the latest cumulative build for 7.6.x:

- ftp://ftp.legato.com/pub/NetWorker/Cumulative_Hotfixes/7.6

The knowledgebase article **esg113332** and the corresponding ETA contain more information on this issue, including symptoms such as error messages that appear when this problem occurs.

Also, refer to the NetWorker /EDL interoperability Matrix in NetWorker Procedure Generator to determine supported NetWorker versions for the applicable EDL version. In NetWorker Procedure Generator, navigate to **NetWorker and Disk Library Integrations -> EDL ESN -> NetWorker -EDL Interoperability Support Matrix**.

The *EMC Information Protection Software Compatibility Guide* provides the supported NetWorker version for the applicable Linux operating systems.

More information regarding all of fixes included in the 7.5 Cumulative build or 7.6 Cumulative build is available in the NetWorker Cumulative fixes documents at the following links:

http://powerlink.emc.com/km/live1/en_US/Offering_Basics/Articles_and_Announcements/NetWorker7_5_CumulativeHotFixes.pdf

http://powerlink.emc.com/km/live1/en_US/Offering_Basics/Articles_and_Announcements/NetWorker7_6_CumulativeHotFixes.pdf

Labelling a Data Domain device to a new pool when the device contains data belonging to a different pool can result in data loss

NW120540

Labelling a Data Domain device to a customized pool when the device does not belong to a Data Domain pool (ddpool) will label the volume but will not mount the volume. If this device contains data that belongs to a different pool prior to labelling the device to the new pool, the data that was saved to the previous pool will be lost.

Workaround

To prevent data loss, ensure that the data previously backed up on the device is already cloned or archived to another destination prior to configuring and labelling the device to a different pool.

To label and mount the device to a customized Data Domain pool:

1. Unmount the device, and disconnect the device from its current pool if it is connected to one.
2. From NMC, go to **Media › Media Pool**, then select the pool name for the customized Data Domain pool.
3. Go to **Properties › Selection Criteria › Devices**, and enable the checkboxes in order to select from the list of devices the device to be used for this pool. Click **OK**.
4. Label that device to the customized Data Domain pool from step two (the default setting is **Mount after Labeling**).

The device will be labeled and mounted successfully.

Labelling a Data Domain device fails after converting the device from AFTD to Data Domain

NW118590

Labelling a Data Domain device fails with the following error message after the device has been converted from an AFTD to a Data Domain device:

```
labelling operation failed on rd=devicename.RO:volume error number is
   a read only attribute
```

This error occurs due to a difference in permissions. When the device is used as an AFTD, the owner of the files and directories is **root**, whereas the owner of the Data Domain device will be the user account configured in the device resource.

Workaround

Perform the following to remove the volume from the media database and change permissions:

1. To remove the volume from the media database, run the following

```
nsrmm -dy <volume name on aftd>
```

2. Change permissions to 777 by running the following:

```
\rm -rf <aftd_path>/*
chmod 777 <aftd_path>
```

The device can now be labelled successfully.

GUI problems and limitations

Username/password validation may fail using NMC New Device wizard for file system browsing if storage node is UNIX

NW120536

When using the NMC New Device wizard to configure an AFTD, username/password validation for browsing the file system may fail if the storage node is a UNIX host. This failure occurs if the system is missing the Pluggable Authentication Modules (PAM) library, or when the rule in the **pam.conf** file (/etc/pam.conf) for **OTHER service** is set to **deny**.

Workaround

If validation fails using the New Device wizard on a UNIX storage node, install the PAM package appropriate to your environment if it is not already installed, and then modify the **pam.conf** file so that the rule for **OTHER service** is not set to **deny**. Refer to your operating system's documentation for more information.

Data Domain systems do not display in NMC Enterprise window or NetWorker Administration Devices window upon reinstalling NMC after a complete uninstall

NW120324

When NMC is uninstalled and the NMC database is removed, upon reinstalling NMC and adding the NetWorker server that has Data Domain devices configured, the Data Domain system does not appear in the NMC Enterprise window or the NetWorker Administration Devices window.

Workaround

To add one of these hosts to the Enterprise:

1. From the Console window, click **Enterprise**.
2. In the left pane, right-click **Enterprise**, then select **New › Host**. The **Add New Host** wizard appears.
3. Enter a hostname, IP address, DNS name, or WINS name in the Host Name attribute, then click **Next**.

Note: Host names and aliases cannot exceed 80 characters.

4. Select the server type and click **Next**.
5. Follow the instructions for configuring the selected host type, then click **Finish**.

After Data Domain Systems are added to the Enterprise, they will appear in NMC Enterprise and the NetWorker Administration Devices window under the Data Domain Systems folder for corresponding NetWorker servers.

Monitoring of SNMP events for Data Domain not available on HP-UX

NW118886

HP-UX operating systems do not monitor SNMP events for Data Domain systems.

NSR clone resources that are created with the nsradmin program cannot be edited as scheduled resources in the GUI

NW115920

NSR clone resources that are created with the **nsradmin** command line program cannot be edited as scheduled clone resources in the Console GUI. Scheduled clone resources can be selected for editing in the Console by opening the NetWorker Administration interface and then selecting **Configuration** › **Clones**.

Workaround

Perform one of the following:

- Create scheduled clone resources in the GUI. Scheduled clone resources can be created and edited in the GUI by opening the NetWorker Administration interface and then by selecting **Configuration** › **Clones**.
- If you must create a NSR clone resources with the **nsradmin** program, create a corresponding NSR task resource with the **nsradmin** program. Together, these resources will enable you to edit the clone item as a scheduled resource in the GUI.

  The corresponding NSR task resource must have its **name** and **action** attributes specified as follows:

  - **name: clone.***nsrclone_resource_name***;**
  - **action: "NSR clone:***nsrclone_resource_name***";**

  For example, if the NSR clone resource was named *TestClone1*, the name and action attributes of the NSR task resource would be:

  - **name: clone.TestClone1**
  - action: NSR clone: TestClone1

  These entries are case-sensitive.

Installation and upgrading problems and limitations

HomeBase Agent 6.2.1 does not automatically install as part of NetWorker Client installation on Red Hat Enterprise Linux 5.5 and later

NW124547

The NetWorker 7.6 Service Pack 1 Client installation does not automatically install HomeBase Agent version 6.2.1 on the Red Hat Enterprise Linux version 5.5 and later platform. However, the NetWorker Client Installer does extract the HomeBase package in the /opt/homebase folder.

Workaround

Manually run the **/opt/homebase/setup-homebase.sh** script to install the HomeBase Agent.

nwclust.pl script must be copied to AutoStart binary installation directory if using NetWorker in AutoStart 5.4 or later cluster environment

NW119766

Starting from release 5.4, AutoStart no longer provides the **nwclust.pl** script. When configuring NetWorker in an AutoStart 5.4 or later cluster environment, contact support to obtain the **nwclust.pl** script, then copy this script to the AutoStart binary installation directory (for example, /opt/EMCas54/bin).

Restore problems and limitations

NetWorker/HomeBase does not support disaster recovery for Active Directory and DFS on Windows 2008

NW123851

When BMR is enabled for NetWorker in a Windows 2008 environment, disaster recovery is not supported for Active directory/DFS deployment. A full system backup of the HomeBase profiles is successful, but recovery of DFS writers fails.

After disaster recovery, remote desktop connection to the recovered system fails with authentication error

NW124657

After performing a disaster recovery with BMR-enabled, attempting to connect to the system using the remote desktop connection fails with the error “An authentication error has occurred.”

Workaround

Change the remote desktop connection file (**Default.rdp**) by adding the following line to the file:

```
enablecredsspsupport:i:0
```

Remote cluster services not started after Authoritative Restore of MSCS cluster database

NW119115

After performing an authoritative restore of the MSCS cluster database on Windows Server 2008 R2, the remote cluster services are not started. An error message similar to the following appears:

```
recover: Unable to start Cluster Service on all the remote nodes
```

Workaround

Restart the cluster services on the remote cluster nodes manually.

Bootmgr file deleted upon recovery of C:\directory with VSS System save set selected

NW116575

If the **bootmgr** file is located under the **C:** directory, a backup of folders under "C :\" with "VSS SYSTEM FILESET: \" will also back up the **bootmgr** file as part of the file system. During recovery, if you select the entire **C:** directory and the **Overwrite** option is selected, the original **bootmgr** file gets deleted and the following errors appear:

```
52973: Winworkr: Didn't recover requested file C:\bootmgr
52973: Winworkr: Didn't recover requested file C:\config.sys
```

This leads to corruption of the machine. Upon rebooting the machine, a message appears indicating "bootmgr file is missing, press Ctrl+Alt+Del to restart".

Note: This issue is only seen when a backup is performed using NMC (scheduled backups) and the machine has its bootmgr file in C:\. This does not occur with client-initiated Winworkr backups. Note also that a machine running Windows 2008 R2 can be configured to hold the boot related files in a separate volume.

Workaround

During recovery, mark the backed up folders present in the C:\ directory one-by-one; do not include the **bootmgr** and **Config.sys** files.

Note: If you select the entire C:\ directory and then try to unmark only bootmgr and config.sys, the recovery will not work.

NDMP: recover or nsrndmp_recover displays debug messages during DSA recover on Windows even though recover is successful

NW115372

When performing a DSA recover on a Windows system using **recover** or **nsrndmp_recover**, debug messages appear, even though the recovery completes successfully. These messages can be ignored.

Security problems and limitations

RPC services security vulnerability

NW124552

EMC Networker uses an RPC library to provide a portmapper service within nsrexecd. The portmapper restricts access for service commands to the localhost. However, the UDP protocol allows malicious users to spoof the source address of the network packet making it appear it originated from the localhost. This potentially may allow a remote malicious user to unregister existing NetWorker RPC services or register new RPC services.

Workaround

EMC NetWorker versions 7.6.1.2 and later contain resolutions to this issue. EMC strongly recommends all customers apply the latest patches which contain the resolution to this issue, at the earliest opportunity.

Details on the 7.6.1.x cumulative fix releases including download details are provided in the NetWorker 7.6 Cumulative Hotfix document at http://powerlink.emc.com/km/live1/en_US/Offering_Basics/Articles_and_Announcements/NetWorker7_6_CumulativeHotFixes.pdf

VMware Consolidated Backup (VCB) problems and limitations

Single step recovery using winworkr fails when VMware Standalone Converter 4.0.x and later is installed

NW122363

Performing a Single Step recovery from the proxy host using the NetWorker User program (winworkr) fails when the installed version of VMware Standalone Converter is 4.0.x and later.

Workaround

Install VMware Standalone Converter version 3.0.3 to the proxy host.

Hot-add operation does not work when Windows proxy is a virtual machine residing on an ESX 4.1 host

NW121774

Due to a VMware limitation, performing a VCB backup on NetWorker with **VCB_TRANSPORT_MODE=hotadd** fails when the Windows proxy is a virtual machine running on an ESX 4.1 host.

VCB topology map shows Helper VM for hotadd mode is associated with same group used for hotadd proxy

NW118106

The Topology map shows that the helper VM used for hotadd mode is associated with the same group that is used for the hotadd proxy VM.

Single Step recovery of VM within a vApp fails with P2V error

NW117233

Performing a Single Step recovery of a VM within a vApp fails with the following error:

```
winworkr: Restore failed with error P2VError
   UNKNOWN_METHOD_FAULT(vmodl.fault.InvalidType)
```

Workaround

Perform disaster recovery to a staging location and then use the latest VMware Standalone Converter 4.x to perform a restore to ESX/VC.

Single Step recovery of Windows 2008 x64 VM fails with P2V error

NW117714

Performing a Single Step recovery of a Windows 2008 x64 VM initiated from the NetWorker server fails with the following error:

```
Check dest params in progress...

...failed with error P2VError
   UNKNOWN_METHOD_FAULT(sysimage.fault.OsVersionNotFound)
```

Workaround

Perform disaster recovery to a staging location and then use the latest VMware Standalone Converter 4.x to perform a restore to ESX/VC.

PVSCSI controller changes to BusLogic controller, leading to boot failure for x64 VMs and performance issues for x86 VMs

NW118197

When performing a Single Step recovery of a VM, the Paravirtual SCSI controller on Windows 2003 VMs gets changed to a BusLogic Parallel controller, resulting in decreased performance for Windows x86 VMs and boot failures for Windows x64 VMs. This issue is only seen if using SSR with VMware Converter 3.0.3.

Workaround

Perform disaster recovery to a staging location and then use the latest VMware Standalone Converter 4.x to perform a restore to ESX/VC.

SSR disaster recovery of SuSE Linux Enterprise Server 11 VM fails with P2V error

NW118200

Performing an SSR disaster recovery of an SLES Enterprise Server 11 VM fails with the following error:

```
winworkr: Restore failed with error P2VError UFAD_SYSTEM_ERROR(Failed
   to find conversion from sles11 to type:
   vim.vm.GuestOsDescriptor.GuestOsIdentifier)
```

Workaround

Perform disaster recovery to a staging location and then use the latest VMware Standalone Converter 4.x to perform a restore to ESX/VC.

Vmxnet3 adapter changes to e1000 adapter during VM recovery

NW118486

When performing a Single Step recovery of a VM, a vmxnet3 network adapter gets changed to an e1000 network adapter.

Workaround

Perform disaster recovery to a staging location and then use the latest VMware Standalone Converter 4.x to perform a restore to ESX/VC.

NetWorker cannot use mapped drive for VCB mount point

NW113740

Attempting to use the VCB mount point on a CIFS share (mapped drive) fails with an error indicating that the device is not a writeable volume.

Workaround

Back up to the VCB mount point on the local disk instead of the CIFS share.

NetWorker 7.6

Table 16 on page 107 identifies problem issues and limitations discovered in NetWorker 7.6.

The known limitations are separated into the following categories:

- "Backup problems and limitations" on page 110
- "Cloning and Staging problems and limitations" on page 113
- "CLI problems and limitations" on page 115
- "Cloud device problems and limitations" on page 115
- "Configuration problems and limitations" on page 115
- "Installation and upgrading problems and limitations" on page 117
- "Messaging problems and limitations" on page 118
- "Performance problems and limitations" on page 119
- "Restore problems and limitations" on page 119
- "VMware Consolidated Backup limitations and descriptions" on page 121
- "General problems and limitations" on page 127

Known limitations related to internationalization support in NetWorker 7.6 are provided in the section "Internationalization support" on page 199

Table 16 Limitations discovered in NetWorker release 7.6 (page 1 of 4)

Issue number	Description of limitation	Operating system affected	Product feature
"LGTsc30233" on page 110	AIX deduplication client fails with AVCTL error due to case-sensitivity	AIX	Backup
"LGTsc31729" on page 111	Savegroup fails when backing up VSS save sets with deduplication enabled	Windows	Backup
"LGTsc31933" on page 111	Multiple passphrases cannot be used for cloud-based encrypted backup and recovery	Windows	Backup
"LGTsc31401" on page 111	Selecting "Discover" option in Software Administration wizard causes nsrcpd process to hang	Solaris	Backup
"LGTsc28262" on page 112	NetWorker Server may take a long time to restart if size of media management database is very large	Windows	Backup
"LGTsc08220" on page 112	Limits in NetWorker support for NTFS	Windows	Backup
"LGTpa88903" on page 112	Cannot backup two NetWorker clients with the same hostname but different fully qualified domain names (FQDNs)	All	Backup
"LGTsc32100" on page 112	DFS backup failure under certain conditions if VSS is enabled	Windows	Backup
"LGTsc19011" on page 113	Savegrp may fail if a client has more than 1116 save sets	AIX, Solaris	Backup
"LGTsc29210" on page 113	Backups may fail if server parallelism is set to maximum value	All	Backup
"NW105699" on page 113	NDMP path-to-tape cloning fails to clone save sets spanning across two volumes	Linux	Cloning
"NW105306" on page 113	Status of aborted clone is not shown under Show Manual Clone History in NMC	Solaris	Cloning
"NW105684" on page 113	Path-to-tape cloning check fails if spanning of first fragment of the source image and destination spanning occur simultaneously during cloning	Linux	Cloning
"LGTsc31283" on page 114	Running nsrclone -J ‹storage node› hangs for any source device type	All	Cloning
"LGTsc29276" on page 114	Path-to-tape cloning requires a separate volume to write the end notes	Linux	Cloning
"LGTsc31929" on page 114	Cloning of Path-To-Tape instance from a tape of different block or device file size than that of the original source tape not supported	All	Cloning
"LGTsc29190" on page 115	Using nsrclone to clone an NDMP clone hangs if source volume is not mounted	Solaris	Cloning
"LGTsc32017" on page 115	nsrlic output may not list all connected clients to NMDA UNIX enabler	UNIX	CLI
"NW105390" on page 115	Directed recover initiated from server may fail with machines in different domains from CLI on Windows	Windows	CLI
"NW104933" on page 115	Cloud device created with target session attribute of 1 even if another value is specified	Windows	Cloud device

Table 16 Limitations discovered in NetWorker release 7.6 (page 2 of 4)

Issue number	Description of limitation	Operating system affected	Product feature
"LGTsc32171" on page 115	NDMP target session value changed to 32 when evaluation mode expires	Linx	Configuration
"LGTsc29940" on page 116	Device file size value cannot be reset to default unless nsrmmd or NetWorker services are restarted	Solaris	Configuration
"LGTsc28693" on page 116	Quantum DXi: May not be able to configure library from a particular node in a DDS configuration	Solaris	Configuration
"LGTsc30786" on page 116	Default client parallelism should be set to 4 except for the NetWorker server	All	Configuration
"NW110327" on page 117	nsrjobd running after uninstallation of Sun StorageTek EBS on Windows	Windows	Installation
"LGTsc32047" on page 117	ConnectEMC software cannot be installed in non-default location	Windows	Installation
"LGTsc32944" on page 117	Library disabled after upgrading from NetWorker 7.4 release to NetWorker 7.6	AIX	Upgrading
"NW105501" on page 118	Usage error does not appear when nsrda binaries run from command line	Solaris	Messaging
"NW105414" on page 118	Logging and warning messages not sufficient when reaching soft runtime limit	All	Messaging
"LGTsc29953" on page 118	Running ndmpsup with full disk specified for output location does not return error	WIndows	Messaging
"NW105832" on page 118	No warning message appears when staging is started for disabled destination device	Windows	Messaging
"NW105777" on page 118	Save output error and parse error messages appear in Savegroup log and NMC Group Details upon backup with directives turned on	WIndows	Messaging
"LGTsc31827" on page 118	Failure status does not display in NMC when invalid hostname specified for ConnectEMC	Windows	Messaging
"LGTsc29791" on page 119	NMC may consume increasing amounts of memory on Windows	Windows	Performance
"LGTsc24128" on page 119	HP TruCluster with DNS enabled may result in slow connections to the NetWorker server	All	Performance
"LGTsc29958" on page 119	Empty directory for NDMP is not recovered during Direct Recover	Linux	Restore
"LGTsc33060" on page 119	Volume mount point is recovered as a folder	Windows	Restore
"LGTsc30685" on page 119	Recovery reports are not generated immediately after a successful recover	Solaris	Restore
"LGTsc17739" on page 120	Changing the alias order in the /etc/hosts file causes NetWorker to rename the NetWorker server and create a new client resource with a different clientid	HP-UX	Restore
"LGTsc00742" on page 120	The recover command may fail if the NetWorker server's short name cannot be resolved from the client	All	Restore
"LGTsc24329" on page 120	Client file index recovery fails for NDMP client on Windows	Windows	Restore

Table 16 Limitations discovered in NetWorker release 7.6 (page 3 of 4)

Issue number	Description of limitation	Operating system affected	Product feature
"LGTsc25674" on page 120	Windows file permissions may be changed after a full recovery	Windows	Restore
"LGTsc31671" on page 120	Unable to recover save sets on NDMP path-to-tape clone volume that has been deleted and then restored using scanner command	Solaris	Restore
"LGTsc30685" on page 119	Recovery reports are not generated immediately after a successful recover	Solaris	Restore
"LGTsc00742" on page 120	The recover command may fail if the NetWorker server's short name cannot be resolved from the client	All	Restore
"LGTsc24329" on page 120	Client file index recovery fails for NDMP client on Windows	Windows	Restore
"LGTsc25674" on page 120	Windows file permissions may be changed after a full recovery	Windows	Restore
"LGTsc31671" on page 120	Unable to recover save sets on NDMP path-to-tape clone volume that has been deleted and then restored using scanner command	Solaris	Restore
"LGTsc32763" on page 121	RECOVER_FULL_PATHS variable for NetApp filer recovery not supported	UNIX	Restore
"NW114517" on page 121	Index browsing (file selection recovery) may not be supported when using VMware clones and the hotadd transport mode	Windows	VCB
"NW105846, NW105379" on page 121	Index browsing fails when traditional backups are performed pior to VCB/VADP backups	Windows	VCB
"NW105962" on page 122	Single step recovery of VM on Virtual Center or ESX server does not work if non-default port number used	Windows	VCB
"NW105583" on page 122	Backup with VCB Directive applied to Windows 2000 VM does not skip system32 folder under C:\WINNT	Windows	VCB
"NW126643, NW105298" on page 122	Multiple "directory is not empty" messages appear during full image recovery or drive letter recovery	Windows	VCB
"NW105265" on page 123	Single-file recovery is not supported for VMs containing non-ASCII filenames	Windows	VCB
"NW105098" on page 123	Performance is slow on Windows VMs when multiple disaster recovery sessions are performed simultaneously	Windows	VCB
"NW105095" on page 123	Stopping the savegroup does not stop the VCB mounter operation	WIndows	VCB
"LGTsc32604" on page 124	Single-step recovery has limitation to restore VMs with thin disks to ESX 4.0 Server.	Windows	VCB
"LGTsc32380" on page 124	File-level recovery of an encrypted file is not supported	Windows	VCB
"LGTsc30075" on page 124	Recovery of a VM host with multiple drives displays "Directory not empty" in the recover GUI	Windows	VCB
"LGTsc30810" on page 125	Additional system generated or user files are recovered during save set recovery from an incremental backup	Windows	VCB

Table 16 Limitations discovered in NetWorker release 7.6 (page 4 of 4)

Issue number	Description of limitation	Operating system affected	Product feature
"LGTsc30813" on page 125	Restored virtual machine starts in forceful powered off state during FULLVM restore	Windows	VCB
"LGTsc31164" on page 125	nsr resource takes default values if invalid application information inputs are provided for the proxy server	Windows	VCB
"LGTsc30927" on page 125	GPT disks are not supported for single file recovery (SFR)	Windows	VCB
"LGTsc31190" on page 125	Single file recovery (SFR) cannot be performed on disks with no drive letter	Windows	VCB
"LGTsc31499" on page 126	Single file recovery (SFR) is not supported for VM's configured with dynamic disks	Windows	VCB
"LGTsc31545" on page 126	Memory footprint for nsrvcb_save is huge during VMware backups	Windows	VCB
"LGTsc31562" on page 126	VM should be in the "powered on" state for the first backup	Windows	VCB
"LGTsc31575" on page 126	Shared folder settings are not restored from a file-level restore on the VM	Windows	VCB
"LGTsc31651" on page 126	Any system changes to the VM requires a full backup	Windows	VCB
"LGTsc31735" on page 127	Save set consolidation is not supported for VCB backups	Windows	VCB
"LGTsc31737" on page 127	No directives are supported for VCB backup when save set is "*FULL*" and the level is "FULL"	Windows	VCB
"LGTsc31971" on page 127	Backup of a powered off VM is only possible if the VM was turned off gracefully	Windows	VCB
"NW110377" on page 127	Secure Storage Library not initialized during Lockbox entry creation due to missing library (fixed for the 7.6 Service Pack 1 release)	HP-UX	General problems
"NW105048" on page 127	NetWorker does not save or recover DFS empty directories	Windows	General problems
"LGTsc32722" on page 127	Archived data not properly indexed on MAC-OS	MAC	General problems
"LGTsc30717" on page 128	NetWorker services might not start due to lock files	All	General problems
"LGTsc32410" on page 128	Compression asm does not work with other asms	Windows	General problems

Backup problems and limitations

AIX deduplication client fails with AVCTL error due to case-sensitivity

LGTsc30233

Deduplication backup of a NetWorker client on AIX may fail with an AVCTL error. This is because client names or domains on the Avamar server are not case-sensitive at the creation time, but are case-sensitive when logging on to a particular domain account.

Workaround

Keep the same naming convention of client name or domain (case-sensitive) after the first client record creation.

Savegroup fails when backing up VSS save sets with deduplication enabled

LGTsc31729

When backing up the VSS save sets on Windows 2008 with deduplication enabled, the savegroup fails with the following error in NMC and the savegroup log upon completion:

```
vm20-win-6:VSS OTHER:\ 57803:save: Saving with De-Duplication enabled
vm20-win-6:VSS OTHER:\ VSS OTHER: No writers found for this save set:
VSS OTHER.
```

Multiple passphrases cannot be used for cloud-based encrypted backup and recovery

LGTsc31933

Multiple passphrases cannot be used for cloud-based encryption and decryption, due to the difficulty of specifying a passphrase for decryption that is different from the one that was used for encrypting that data. The passphrase used when backing up encrypted data must be the same one used when performing a recovery and decrypting the data.

The **recover -p** option, which provides a way to specify a passphrase different from the one currently configured on the NetWorker server, cannot be used for encrypted cloud backups.

The following limitations also apply to passphrase use in NetWorker:

- A cloud device can only support one single passphrase for both backup and recovery when encryption is enabled.
- Changing the datazone passphrase impacts all newly initiated backup and recovery operations and should be avoided.
- If a backup using an old passphrase needs to be recovered, that old passphrase must be restored on the NetWorker server during the recovery process.

Selecting “Discover” option in Software Administration wizard causes nsrcpd process to hang

LGTsc31401

When you perform “Add products to the repository” using the Software Administration wizard in NMC and select **Discover** after successful completion of the task, the **nsrcpd** process becomes unresponsive and the application hangs.

Workaround

To avoid this issue, perform one of the following:

- Kill the **nsrcpd** process, then restart the daemons. Selecting the **Discover** option in NMC now completes successfully.
- Run the command line utility **nsrpush** to perform the operation instead of using NMC.

NetWorker Server may take a long time to restart if size of media management database is very large

LGTsc28262

If the NetWorker media management database is very large, the NetWorker server may take a long time to establish client connections when it is restarted. The reason is that a consistency check of the media management database is triggered when the server is restarted.

To reduce the size of the media management database, run the **nsrim -C** command. Be aware that this command may take a long time to run and that the NetWorker server will be unavailable during this time. Run the command when the NetWorker server is not busy.

More information about reducing the media management database is provided in the *NetWorker Administration Guide*.

Limits in NetWorker support for NTFS

LGTsc08220

The NetWorker software supports the backup and recovery of NTFS using Win32 API-defined subsystem. Besides Win32 Subsystem, NTFS also supports other subsystems like Portable Operating System Interface (POSIX). The Win32 subsystem supports certain file naming conventions, and does not have ability to support file naming conventions of other subsystems like POSIX, such as the ability to differentiate between filenames that are identical except for uppercase and lowercase characters (for example, temp.txt and TEMP.txt) and the ability to have multiple dots (.) in filenames.

POSIX applications that access NTFS file systems may implement file naming convention differently than the Win32 subsystem. It is possible that certain file naming features may be present that are not part of the Win32 subsystem. If this is the case, the NetWorker software will not correctly back up these files.

Cannot backup two NetWorker clients with the same hostname but different fully qualified domain names (FQDNs)

LGTpa88903

NetWorker cannot cope with two different machines that have the same hostname but different FQDNs. For example, if two divisions of a company have a machine named "mailserver.abc.com" and "mailserver.xyz.com," they will be unable to back up the second host.

DFS backup failure under certain conditions if VSS is enabled

LGTsc32100

If VSS is enabled, a DFS backup or a VSS SYSTEM BOOT backup may fail under the following conditions:

- The namespace folder is not a shared folder target.
- Replication is configured for the namespace.
- Files exist in the namespace folder and have replicated to the member server.

Workaround

To avoid this issue, create a namespace in the folder target or do not enable replication.

Savegrp may fail if a client has more than 1116 save sets

LGTsc19011

A savegrp operation may fail when client is configured with more than 1116 save set files. The following message may appear:

```
Probe job had unrecoverable failure(s), please refer to daemon.raw for
further details
```

Backups may fail if server parallelism is set to maximum value

LGTsc29210

Index backups may fail with the following error message if the maximum server parallelism is set to 400 and there were 400 simultaneous sessions running:

```
server-name:index 1 retry attempted
server-name:index P?: No such file or directory
```

Workaround

Reduce the server parallelism value.

Cloning and Staging problems and limitations

NDMP path-to-tape cloning fails to clone save sets spanning across two volumes

NW105699

NDMP path-to-tape cloning of a volume fails to clone save sets that span across two volumes. However, when that save set is cloned individually, cloning is successful.

Status of aborted clone is not shown under Show Manual Clone History in NMC

NW105306

When the **nsrndmp_clone** operation is aborted from the command line, **Show Manual Clone History** in NMC does not display the status.

Path-to-tape cloning check fails if spanning of first fragment of the source image and destination spanning occur simultaneously during cloning

NW105684

The path-to-tape cloning check, which checks the consistency of the source tape file size while cloning is in progress, fails if spanning of the first fragment of the source image and destination spanning occur at the same time during cloning. A series of **nsrndmp_clone** error messages similar to the following will display, indicating the tape file size error and identifying which save set failed cloning.

```
nsrndmp_clone: Tape server paused: reached the end of file
nsrndmp_clone: Error - Incorrect tape file size 1073741824
nsrndmp_clone: Tape server halted: The backup is aborted by operator.
```

```
nsrndmp_clone: Failed to clone /Builds (ssid 3119103906)
nsrndmp_clone: Failed to clone the following save sets: 3119103906
```

Workaround

Manually clone the failed save set to another destination volume that has enough free space to accommodate the save set.

Running nsrclone -J ‹storage node› hangs for any source device type

LGTsc31283

If **nsrclone** is specified with **-J** *‹storage node›* for any source device type and that storage node is not permitted for use based on the affinity lists, **nsrclone** will loop indefinitely and a failure level error appears.

Path-to-tape cloning requires a separate volume to write the end notes

LGTsc29276

During path-to-tape cloning, **mminfo** does not display end notes as part of the clone image.

For example, configure NetWorker Server, Client, or Storage node for path-to-tape. Configure the source and target jukeboxes with the same type of device and default size. Manually save multiple save sets to the source volume so that one of the volume spans to another volume. Using the following command, execute path-to-tape cloning for all the save sets including the spanned save sets in the same sequence as they are backed up:

```
nsrndmp_clone -b "Default Clone"-J <clone storage node> -p -S <ssid>
```

When the save sets span across two volumes and writes only end notes in the third volume, then the clone completion message and the **mminfo** command displays only the first two volumes and skips the third volume as it does not contain any save sets.

Note: The third volume is not required in order to complete the restore.

Cloning of Path-To-Tape instance from a tape of different block or device file size than that of the original source tape not supported

LGTsc31929

Cloning of path-to-tape (opaque) clone is not supported for destination tapes with different block or device file size from that of the original source.

Example

Create a backup save set (Clone instance 0) on a LTO-3 tape with a block size of 128KB and a device file size of 4 GB. Using path-to-tape, create a clone save set (Clone instance 1) to another LTO-1 tape with a block size of 64KB and a device file size of 1 GB. When attempting to create a new instance from Clone instance 1, cloning fails with the following error:

```
nsrndmp_clone: Incorrect tape file size <current_tape_file_size>
nsrndmp_clone: Set device file size to <recommended_value> in source
device properties
```

Workaround

Change the source device file to the value suggested by the nsrndmp_clone message. Once cloning is complete, change the source device file to its original value.

Using nsrclone to clone an NDMP clone hangs if source volume is not mounted

LGTsc29190

If you perform an NDMP clone of a save set and then use nsrclone to clone the NDMP clone, the operation will hang if the source volume is not mounted.

Workaround

Mount the source volume manually before starting the nsrclone operation.

CLI problems and limitations

nsrlic output may not list all connected clients to NMDA UNIX enabler

LGTsc32017

The output produced by running **nsrlic -v** may not list all Virtual clients as connected clients to the NMDA UNIX enabler.

Workaround

Add NMDA UNIX enabler, then backup the virtual client for the Solaris host first.

Directed recover initiated from server may fail with machines in different domains from CLI on Windows

NW105390

Directed recovery may fail when performing the directed recover on the Windows NetWorker server to the remote client when the NetWorker server and client are in different domains. In this case, perform the directed recovery from the NetWorker User program.

Cloud device problems and limitations

Cloud device created with target session attribute of 1 even if another value is specified

NW104933

When a cloud device is created using **nsradmin** or NMC with a target sessions attribute other than 1, the NSR device resource is always created with a target sessions attribute of 1 rather than the specified value.

Configuration problems and limitations

NDMP target session value changed to 32 when evaluation mode expires

LGTsc32171

The NDMP device target session attribute is changed to 32 after the expiration of evaluation mode.

Workaround

Manually change the Target session attribute from 32 to 1 and then enable the NDMP drives.

Device file size value cannot be reset to default unless nsrmmd or NetWorker services are restarted

LGTsc29940

There is no way to reset the value of "device file size" in NMC to the default value without restarting **nsrmmd** or restarting the NetWorker services.

Quantum DXi: May not be able to configure library from a particular node in a DDS configuration

LGTsc28693

When virtual devices, tape libraries and drives exported from the DXi host are configured in a DDS (Dynamic Drive Sharing) configuration and one of the DXi libraries is deleted from the DDS configuration and subsequently rescanned and reconfigured, the operation may fail with the error message "Storage node *xxxxx* is not part of storage node list associated with NSR unconfigured library". This can occur due to a DXi SCSI reserve/release issue after a new install or server/storage node reboot.

Workaround

Perform one of the following:

- Reboot the DXi hosts, then perform a re-scan from the storage node that encountered the initial failure. The reboot of the DXi forces a release of the SCSI reservation.
- Configure the failed DXi library from another storage node in the DDS configuration.

Default client parallelism should be set to 4 except for the NetWorker server

LGTsc30786

The client parallelism attribute for a NetWorker client is set to 12 by default. This value can cause problems with interoperability features such as Avamar, EMC Celerra backups, and VSS backups.

Workaround

Set the client parallelism attribute on NetWorker clients to 4. However, keep the NetWorker server client parallelism attribute set to 12.

Installation and upgrading problems and limitations

Upgrade of NMC for NetWorker 7.4 Service Pack 5 to release 7.6 may result in core dump on AIX

NW113316

When performing an upgrade from NetWorker 7.4 Service Pack 5 to release 7.6 on AIX, uninstallation of the previous NMC may result in a core dump of the dbsrv9 process, with a core file created in the *‹NMC install dir›*/cores/gstd directory. This has no impact on Console functionality after the upgrade, and can be ignored.

NETWORKER.cfg file must be backed up prior to upgrading from any NetWorker version 7.5 Service Pack 1 or earlier

NW110457

When upgrading from any version of NetWorker 7.5 Service Pack 1 or earlier, the **NETWORKER.cfg** file must be backed up on each client and used to replace the new **NETWORKER.cfg** file created after the upgrade, in order to maintain user preferences.

nsrjobd running after uninstallation of NetWorker on Windows

NW110327

The **nsrjobd** process continues to run after NetWorker has been uninstalled on Windows. As a result, the NetWorker Installation folder cannot be deleted.

Workaround

Using Task Manager, kill the **nsrjobd** process manually and then delete the NetWorker installation folder.

ConnectEMC software cannot be installed in non-default location

LGTsc32047

The ConnectEMC software is installed under C:\Program Files by default, and cannot be installed to a non-default location.

Library disabled after upgrading from NetWorker 7.4 to NetWorker 7.6

LGTsc32944

After upgrading from a NetWorker 7.4 release to NetWorker 7.6, configured libraries may not become available and, after several unsuccessful connection attempts, may be disabled. This may be due to a Control Port change.

Workaround

To work around this issue:

1. Disable the library.
2. Re-scan the Storage node where the failure occurred.
3. Re-enable the library.

The Library now appears in the Ready State.

Messaging problems and limitations

This section details the problems and limitations related to error messages.

Usage error does not appear when nsrdsa binaries run from command line

NW105501

nsrdsa binaries are not meant to be run from the command line. However, when this is attempted, NetWorker hangs and does not display an error notifying the user of the incorrect usage.

Logging and warning messages not sufficient when reaching soft runtime limit

NW105414

When a soft runtime limit is reached for any operation, the logging and warning messages do not provide any information about the limit being exceeded.

Running ndmpsup with full disk specified for output location does not return error

LGTsc29953

When **ndmpsup** is run (**ndmpsup -c client -o** *‹disk›*) and the location specified for the output file is a disk that is full, no error message appears indicating that the disk is full, and only a partial output file is created.

No warning message appears when staging is started for disabled destination device

NW105832

No warning or error message appears when staging is started and the destination device is disabled. An error message should display indicating that NetWorker is waiting for 1 writable device.

Workaround

Check the device configuration prior to staging and enable the device if necessary.

Save output error and parse error messages appear in Savegroup log and NMC Group Details upon backup with directives turned on

NW105777

When backing up a client with directives turned on, the savegroup passes successfully. However, parse error messages and save output errors appear in the Savegroup log file and NMC Group Details window, such as "bad directory specification for /nsr/tmp".

Failure status does not display in NMC when invalid hostname specified for ConnectEMC

LGTsc31827

When an invalid hostname is used as the ConnectEMC server, the failed status appears in the daemon log but does not display in NMC.

Performance problems and limitations

NMC may consume increasing amounts of memory on Windows

LGTsc29791

Over a period of time, NMC may consume large amounts of memory that could result in the system becoming unresponsive.

HP TruCluster with DNS enabled may result in slow connections to the NetWorker server

LGTsc24128

If DNS is enabled on TruCluster, connections to the NetWorker Server are delayed about 30 seconds each. Also the initial start of the NetWorker server may take longer.

Workaround

Disable DNS on the TruCluster server.

Restore problems and limitations

Empty directory for NDMP is not recovered during Directed recover

LGTsc29958

Performing a Directed recover of an empty directory for NDMP does not recover the empty directory, even though the operation is reported as successful.

Volume mount point is recovered as a folder

LGTsc33060

When performing a mount point recovery, the volume mount point is recovered as a folder instead of a mount point.

Workaround

To recover the data within the mount point:

1. Manually create the mount point (if it does not exist already).
2. Use **winworkr** to recover the data under the mount point.

This procedure is documented in the *NetWorker Administration Guide.*

Recovery reports are not generated immediately after a successful recover

LGTsc30685

After a successful recover, a subsequent savegroup completion is required to generate the recovery report as the index is updated only after the completion of a save group.

Changing the alias order in the /etc/hosts file causes NetWorker to rename the NetWorker server and create a new client resource with a different clientid (fixed in NetWorker 7.6 SP3)

LGTsc17739

The NetWorker server always takes the first alias specified in the **/etc/hosts** file as the NetWorker server name. If the first alias in **/etc/hosts** is different than the current NetWorker server name client resource, the next time the NetWorker daemons start, NetWorker will rename the NetWorker server to the first alias listed in /etc/hosts, and assign a different clientid.

Workaround

To avoid this issue, when adding or modifying the **/etc/hosts** file, ensure the first alias exactly matches the current NetWorker server name client resource.

The recover command may fail if the NetWorker server's short name cannot be resolved from the client

LGTsc00742

The recover operation may fail if the short name of the NetWorker server cannot be resolved from the client performing the recover.

Client file index recovery fails for NDMP client on Windows

LGTsc24329

Recovery of the client file index fails when running **nsrck -L7** for an NDMP client that was running on Windows.

Windows file permissions may be changed after a full recovery

LGTsc25674

If all of the system files are recovered and "overwrite existing files" was selected, some system configuration permissions and security settings may be changed.

Unable to recover save sets on NDMP path-to-tape clone volume that has been deleted and then restored using scanner command

LGTsc31671

You may be unable to recover save sets from a volume that has been restored using the scanner command in the following situation:

1. Perform a multiplexed backup.
2. Perform an NDMP Path-to-tape clone of the volume.
3. Delete the volume containing the clone instance.
4. Run the scanner command on the deleted volume.
5. Try to recover a save set.

RECOVER_FULL_PATHS variable for NetApp filer recovery not supported

LGTsc32763

When performing a DAR recovery for a NetApp filer, the NetApp specific environment setting "RECOVER_FULL_PATHS" is not supported for NetWorker release 7.6. Setting or unsetting the NetWorker environment variable "NSR_NDMP_RECOVER_NO_FULL_PATHS" no longer has any effect on this NetApp specific environment setting (for example, RECOVER_FULL_PATHS) for the DAR recovery.

VMware Consolidated Backup limitations and descriptions

Note: NetWorker 7.6 supports only Microsoft Windows 2003 (32-bit or 64-bit) OS on the VCB proxy.

Index browsing (file selection recovery) may not be supported when using VMware clones and the hotadd transport mode

NW114517

Due to a VMware limitation, when the VCB transport mode is set to **hotadd** (VCB_TRANSPORT_MODE=hotadd), index recovery is not supported in the following cases:

- If either the virtual machine to be backed up or the VCB proxy virtual machine are VMware clones of one another.
- If both the virtual machine to be backed up and the VCB proxy virtual machine were cloned from the same parent virtual machine.

Index browsing fails when traditional backups are performed prior to VCB/VADP backups

NW105846, NW105379

If there are traditional NetWorker client-based backups already existing for a VM client and VCB/VADP backups of the same client are performed, then a browsable recovery may not display the entire index of the client.

The following VCB/VADP backups are affected:

- *FULL* (with FLR enabled)
- ALLVMFS

Workaround

Perform one of the following:

- If you know the exact path of the file/folder to be recovered, then in the command line interface of the recovery, browse to the path of the particular folder to view the index.

  For example, if **C:\test-data\D1** is the folder to be recovered, then run **recover>cd C:\test-data\D1** from the command line to view the index and recover its contents.
- Run the **nsrim** command on the NetWorker server to mark the browsable save sets corresponding to the traditional backup as recoverable save sets in order to view the full index of the client.

For example, if the client 10.31.79.12 already has a traditional backup for the save set C:\F1, then run the following command to delete the indexes of such traditional savesets:

```
nsrim -c 10.31.79.12 -N C:\F1 -l
```

The last parameter in this command is a lower-case L

Note: This command removes the oldest full save and all dependant save sets from the online index. You may need to run this command multiple times for every level full browsable traditional save set present.
Browsable recovery of the traditional backup save sets will no longer be possible once the indexes are removed. However, you can still perform a save set recovery for the traditional backups whose indexes are removed.

Single step recovery of VM on Virtual Center or ESX server does not work if non-default port number used

NW105962

Single step recovery of a VM cannot be performed on the Virtual Center or ESX server if a non-default port number (a port number other than 443) is used.

Workaround

Recover the VM image to a staging location and use VMware Converter to export the VM image to the ESX server.

Backup with VCB Directive applied to Windows 2000 VM does not skip system32 folder under C:\WINNT

NW105583

When VCB Directive is applied to a Windows 2000 VM, the system32 folder under C:\WINNT is not skipped during backup. File-level full and incremental backups with VCB Directive enabled should skip the system and system32 folders in the Windows install folder.

Multiple “directory is not empty” messages appear during full image recovery or drive letter recovery

NW126643, NW105298

When using the recover command or the NetWorker User program (winworkr), save set recovery of full image or browsable recovery of an entire drive letter displays multiple incorrect error messages similar to the following:

```
cannot write to <directory_location>: The directory is not empty.
```

The recovery completes successfully and these messages can be ignored.

Single-file recovery is not supported for VMs containing non-ASCII filenames

NW105265

If VMs contain filenames with non-ASCII characters, single-file recovery is not possible and the full-image backup implementation is used for backup.

Workaround

Perform the ALLVMFS backup and recover.

Performance is slow on Windows VMs when multiple disaster recovery sessions are performed simultaneously

NW105098

When performing disaster recovery of multiple Windows VMs simultaneously from the same proxy machine, the recovery time increases due to VMware VDDK limitation.

Workaround

Perform disaster recovery of multiple VMs in a sequential manner instead of performing recovery simultaneously.

Stopping the savegroup does not stop the VCB mounter operation

NW105095

When you stop the savegroup, the VCB mounter does not stop until the operation is completed.

Workaround

Stop the VCB mounter operation manually.

Savegroup log error message for Hypervisor user without VCB privileges is not descriptive

LGTsc30913

The error message that appears if a Hypervisor user attempts a VCB operation but does not have VCB privileges does not fully describe the problem. The message indicates:

```
nsrvcb_save: Error: Other error encountered: vim.fault.NoPermission
Only full level VCB backups can be performed when Backup renamed
directories attribute is enabled
```

Only full level VCB backups can be performed when Backup renamed directories attribute is enabled

LGTsc30843

When enabling the **Backup renamed directories** attribute for a VM client instance, you can only perform full level VCB backups. You cannot perform incremental and differential file-level backups with the attribute enabled.

Single-step recovery has limitation to restore VMs with thin disks to ESX 4.0 Server

LGTsc32604

Due to the VMware Converter 3.0.3 limitation, single-step recovery always restores the VM with thick disks irrespective of whether the VM was configured with thin disks before.

Workaround

To restore the VM with thin disks to ESX 4.0, first perform recovery to a staging location and then use the VMware Converter 4.x to perform disaster recovery (DR) with thin disks.

File-level recovery of an encrypted file is not supported

LGTsc32380

Due to Microsoft Windows limitation, browsable recovery of a NTFS encrypted file to a local file system on a proxy machine is not supported.

Workaround

Share a CIFS folder from the VM and perform a recovery of the encrypted file from the VCB proxy to the CIFS share directly or install NetWorker Client on the VM to recover encrypted file to a local file system of the VM.

Limitations when performing file-level recovery of image-level backup

The following considerations apply when performing a file-level recovery of an image-level backup:

- Support for file-level recovery from image-based backup is available only on Windows.
- File-level recovery is supported only on VMs having Windows OS with NTFS5 file system.
- File-level incremental backup of a VM is not supported after a hardware change in the VM. Perform a full image-level backup after every change in the VM hardware.
- In case of a remote VCB proxy client, single step recover requires the members of the VCB proxy clients administrator group to be part of the remote access list of the VM clients or should have the "Remote access all clients" privilege.

Recovery of a VM host with multiple drives displays "Directory not empty" in the recover GUI

LGTsc30075

During a ALLVMFS backup on a VM host with multiple drives, select all the drives to be recovered in the recovery GUI and start the recovery to the relocated target location. Recovery is completed successfully to the target location with "Directory not empty" error at the end of each selected drive.

Workaround

Ignore the error. The recovery completes successfully.

Additional system generated or user files are recovered during save set recovery from an incremental backup

LGTsc30810

During VCB incremental backup, additional files modified since the last backup, including system generated files or user files, are backed up.

Workaround

Ensure sufficient disk space is available for recovery. Ignore the additional files that are recovered.

Restored virtual machine starts in forceful powered off state during FULLVM restore

LGTsc30813

During a FULLVM restore using the GUI or Command Line Interface, the restored virtual machine will start in forceful powered off state due to VCB snapshot limitations.

nsr resource takes default values if invalid application information inputs are provided for the proxy server

LGTsc31164

When wrong inputs are provided in the Application Information tab for the proxy server, nsr resource will take the default values by default. For example, if VCB_TRANSPOSRT_MODE=nbd and the user types VCB_TRANSPORTMODE=nbd, then the nsr resource takes the default mode of transport VCB_TRANSPORT_MODE=san.

Workaround

Ensure to provide the correct values.

GPT disks are not supported for file-level recovery

LGTsc30927

During a image-based backup, GPT disks are not supported for file-level recovery. If the VM has any GPT disk then the backup will always be image-based backup without support for file-level recovery.

Workaround

Ensure there are no GPT disks.

Single file recoverycannot be performed on disks with no drive letter

LGTsc31190

When a disk is formatted with NTFS partition without a drive letter, file systems which are candidates for single file recovery (SFR) backup will adopt FULLVM method of backup.

Workaround

Ensure each disk partition is associated with a drive letter.

Single file recovery is not supported for VM's configured with dynamic disks

LGTsc31499

When VM's are configured with dynamic disks, SFR is not supported.

Workaround

Ensure there are no dynamic disks.

VCB implementation is not supported on VM's configured on or with RDM physical disks

LGTsc31500

VCB (FULLVM or SFR) implementation is not supported when VM's are configured on RDM physical disks or disks which are attached to RDM physical disks.

Memory footprint for nsrvcb_save is huge during VMware backups

LGTsc31545

When VCB backups are performed, nsrvcb_save binary consumes huge amount of memory. For example, to back up a VM with 200 GB vmdk, nsrvcb_save binary can consume up to 1.15 GB of RAM.

Therefore, it is recommended to provision a minimum of 1 GB or more memory space for nsrvcb_save binary.

Note: For every VM backup, one nsrvcb_save binary is spawned. Memory consumed by the nsrvcb_save binary should be released once the VM backup is complete.

VM should be in the "powered on" state for the first backup

LGTsc31562

When running the first backup, the VM should be in the powered on state irrespective of whether the VCB_VM_LOOKUP_METHOD is based on the IP address or the display name.

Shared folder settings are not restored from a file-level restore on the VM

LGTsc31575

When a file-level restore is performed from a full image or incremental or differential backup of a shared folder on the VM, the share settings on the folder are not restored.

Workaround

Manually reset the share settings for the folder.

Any system changes to the VM requires a full backup

LGTsc31651

When you add or delete hard disks, install or uninstall applications, or update OS patches to the VM, perform a full level backup manually.

Save set consolidation is not supported for VCB backups

LGTsc31735

For any VCB backup, either full image or file-level, save set consolidation is not supported.

No directives are supported for VCB backup when save set is "*FULL*" and the level is full

LGTsc31737

During VCB backups, when the save set is "*FULL*" and the level is full, no directives are supported. For example, directives such as **skip** are not supported for VCB image-level backup because disaster recovery is not possible after using this directive.

Backup of a powered off VM is only possible if the VM was turned off gracefully

LGTsc31971

Before performing a VCB backup with file-level recovery for a VM in powered off state, complete the shutdown process of the VM gracefully.

General problems and limitations

Secure Storage Library not initialized during Lockbox entry creation due to missing library (fixed for the 7.6 SP1 release)

NW110377

When you create a lockbox entry (using either **nsradmin**, NMC, or the client configuration wizard) on HP-UX ia64, lockbox entry creation fails with an error indicating that the Secure Storage Library was not initialized. This is due to a missing library, **libccme.sl**.

A hot fix containing the missing library **libccme.sl** has been provided in **ftp://ftp.legato.com/pub/NetWorker/Updates/NW110377**. Instructions for installing the hot fix are provided in the ReadMe file at **ftp://ftp.legato.com/pub/NetWorker/Updates/NW110377/README**.

NetWorker does not save or recover DFS empty directories

NW105048

DFS empty directories are not backed up or recovered by NetWorker.

Archived data not properly indexed on MAC-OS

LGTsc32722

When data is archived using **nsrarchive** on a MAC-OS platform, NetWorker adds a "/" to the name of the save set in the index. For example, the path **/Volumes/sat-tree/scip2c217/backup/qgO** becomes **/Volumes/sat-tree/scip2c217/backup/qgO/**, and the data can only be retrieved if "/" is added to the end of the name.

NetWorker services might not start due to lock files

LGTsc30717

If the **nsrmmgd** process is terminated and a message similar to the following appears, ensure that all **nsrmmgd** processes have been shutdown. The NetWorker software keeps the locks in place until all instances of **nsrmmgd** are gone.

```
nsrmmgd SYSTEM error: Lock file `C:\Program Files\EMC
   NetWorker\nsr\tmp\nsrmmgd.lck' cannot be locked.
```

Compression asm does not work with other asms

LGTsc32410

The compression asm does not work in conjunction with any other asms.

NetWorker releases previous to 7.6

Table 17 on page 128 identifies problem issues and limitations discovered in NetWorker release 7.5.

The known limitations are separated into the following categories:

- "Backup problems and limitations descriptions" on page 131
- "CLI problems and limitations descriptions" on page 132
- "Configuration problems and limitations descriptions" on page 133
- "Devices and media problems and limitations descriptions" on page 135
- "GUI problems and limitations descriptions" on page 137
- "Installation problems and limitations descriptions" on page 138
- "Licensing problems and limitations descriptions" on page 138
- "Localization problems and limitations descriptions" on page 138
- "Messaging problems and limitations descriptions" on page 139
- "Performance problems and limitations descriptions" on page 141
- "Restore problems and limitations descriptions" on page 141
- "Security problems and limitations descriptions" on page 144
- "Upgrading problems and limitations descriptions" on page 144

Table 17 Limitations discovered in NetWorker releases previous to 7.6 (page 1 of 3)

Issue number	Description of limitation	Operating system affected	Product feature
"LGTsc25711" on page 132	Running nsravtar directly from the command line might fail	AIX	CLI
"LGTsc26202" on page 133	Cannot configure Windows Firewall Support in the NetWorker Installation wizard	Windows	Configuration
"LGTpa94658" on page 134	NMC cannot connect to GSTDB if EMC AlphaStor or EMC DPA is installed	All	Configuration

Table 17 Limitations discovered in NetWorker releases previous to 7.6 (page 2 of 3)

Issue number	Description of limitation	Operating system affected	Product feature
"LGTsc28059" on page 135	Multiplexing must be disabled for save sets to be cloned from the DXi/DL3D using NDMP path-to-tape	All	Devices and Media
"LGTsc27571" on page 136	Tapes left in "Ejecting" state after labelling large number of volumes in a Windows virtual environment	Windows	Devices and Media
"LGTsc27106" on page 137	Querying large numbers of save sets in the NetWorker user interface may cause a Java heap space error	Windows	GUI
"LGTsc26673" on page 138	Inconsistent license information displayed for NDMP Workstation Client	Windows	Licensing
"LGTsc26980" on page 204	Non-ASCII hostnames are not supported by NetWorker	Windows	Localization
"LGTsc31111" on page 139	Savegroup Completion report output contains extra, unnecessary information	All	Messaging
"LGTsc26965" on page 140	Single step recovery of a full virtual machine: some error messages are cyptic	Windows	Messaging
"LGTsc27063" on page 140	Single step recovery of a full virtual machine: some messages are non-standard	Windows	Messaging
"LGTsc24358" on page 144	When upgrading to NetWorker release 7.5 on Windows, reboot NMC	Windows	Upgrading
"LGTsc24329" on page 141	Recovering client file index fails if NDMP attribute is selected on client resource	Windows	Restore
"LGTsc27447" on page 142	Single step recovery of a full virtual machine: VCB restore must use Virtual Center IP/name and password/username combination if Virtual Center used for backup	Windows	Restore
"LGTsc26268" on page 142	Single step recovery of a full virtual machine: Validation of the VC/ESX server credentials are validated once the NetWorker recover complete	Windows	Restore
"LGTsc22164" on page 131	Software distribution feature cannot be used to perform upgrade on some platforms	Linux, Solaris	Backup
"LGTsc24483" on page 131	Low system memory may cause unpredictable results	Solaris	Backup
"LGTsc15176" on page 131	VCB backup of multiple virtual machines simultaneously may fail		Backup
"LGTsc11447" on page 131	Hosts file entries for IPv6 must contain localhost before aliases	AIX	Backup
"LGTsc11274" on page 131	Backup fails when save set list has a very large number of save sets defined	Solaris	Backup
"LGTsc21070" on page 132	Save jobs may terminate prematurely or later than desired if NetWorker server and clients time settings differ	All	Backup
"LGTsc14530" on page 132	VCB fails with custom pre-freeze script error	All	Backup
"LGTsc23714" on page 132	Savegroup initiated with "@" symbol at beginning of name does not trigger desired group	All	CLI
"LGTsc10723" on page 133	AFTD direct file recover option may yield incomplete volume information	Solaris	CLI

Table 17 Limitations discovered in NetWorker releases previous to 7.6 (page 3 of 3)

Issue number	Description of limitation	Operating system affected	Product feature
"LGTsc23081" on page 135	NetWorker Console unable to generate reports in pure IPv6 environment	HP-UX	Configuration
"LGTsc18543" on page 135	Relabelling volume after deleting remote client resource does not purge file index	Windows	Configuration
"LGTsc11811" on page 135	Do not perform client backups using temporary IPv6 addresses	Linux, Windows	Configuration
"LGTsc17146" on page 136	Raw disk backup and restore not supported on NetWorker with Microsoft Windows 2008	Windows	Devices and Media
"LGTsc07321" on page 136	Inquire command does not detect tape drive on HP-UX	HP-UX	Devices and Media
"LGTsc12061" on page 137	Cannot dismiss events in the events table until the event is resolved	All	GUI
"LGTsc08415" on page 137	A user cannot be a member of more than 512 groups	Windows	GUI
"LGTsc17805" on page 138	NetWorker installation directory path longer than 160 characters returns error, but installation still completes successfully	Windows	Installation
"LGTsc26210" on page 138	License Conformance Summary displays incorrect base license type	Solaris	Licensing
"LGTsc21657" on page 203	In a non-English environment, the character encoding used for the NMC client and NetWorker client must be the same	Windows	Localization
"LGTsc26288" on page 204	JRE 1.6 users cannot export reports as PDF documents for non-English locales on AIX and HPUX	All	Localization
"LGTsc22735" on page 140	mminfo query ignores "!" on non-boolean fields	Windows	Messaging
"LGTsc21253" on page 141	nsrjobd may consume large amount of memory depending on backup environment	Windows	Performance
"LGTsc19690" on page 141	NetWorker programs may experience delays on SuSE Linux Enterprise Server version 9.x using IPv6	Linux	Performance
"LGTsc12672" on page 143	nsrck -L7 -t must be performed with additional steps in order to recover client index with save sets passed browse period	All	Restore
"LGTsc20723" on page 143	Ctime attribute not modified on AIX version 5.3 and later, Mac OS X version 10.4 and later	AIX, Mac OS X	Restore
"LGTsc21704" on page 144	Authentication error appears when NetWorker connecting to client	Solaris	Security
"LGTsc24076" on page 144	New client's global attributes do not inherit existing client values after upgrading NMC	Windows	Upgrading

Backup problems and limitations descriptions

Software distribution feature cannot be used to perform upgrade on some platforms

LGTsc22164

You cannot perform a NetWorker upgrade using the software distribution feature on the linux_ia64, linux_ppc64, and solaris_amd64 client platforms.

Low system memory may cause unpredictable results

LGTsc24483

If your NetWorker server runs low on system memory, unpredictable behavior could result. "Environment and system requirements" on page 30 provides information on minimum recommended system requirements.

VCB backup of multiple virtual machines simultaneously may fail

LGTsc15176

Due to a limitation in VMware Consolidated Backup (VCB) version 1.1, a VCB backup of multiple virtual machines simultaneously may fail with an exit code of -2146234327.

Workaround

There are two possible workarounds for this limitation:

1. Upgrade to VMware Consolidated Backup version 1.5.
2. Update the following settings in the config.js file used by VCB on the VCB proxy host:
   a. Set MAX_RETRIES to a number greater than 0.
   b. Set PREEXISTING_MOUNTPOINT to **delete** to attempt to remove the pre-existing mount point.

Hosts file entries for IPv6 must contain localhost before aliases

LGTsc11447

If an entry for the IPv6 localhost address ::1 is added to the /etc/hosts file, localhost must be entered before aliases such that the order is *‹address› ‹localhost› ‹alias›*. For example, if the alias was "loopback", the entry for this address should read:

::1 localhost loopback

Backup fails when save set list has a very large number of save sets defined

LGTsc11274

When a very large number of save sets are defined in the client's save set attribute, backups may fail with the message:

```
SYSTEM error: Not enough space
```

This error may occur when the total length of all save sets included in the save set list exceeds 25 KB.

Workaround

Create one or more Client resources for the client and divide the save sets between the two clients. The *NetWorker Administration Guide* provides information about creating multiple client resources for the same client.

Save jobs may terminate prematurely or later than desired if NetWorker server and clients time settings differ

LGTsc21070

The NSR_UNRESPONSIVE_JOB_TIMEOUT environment variable can be used to automatically terminate jobs that have no activity for a predetermined period of time regardless of their state. If this environment variable is used and there is a discrepancy between client and server times, save jobs may be terminated prematurely or later than desired.

Workaround

Periodically synchronize the time between the NetWorker server and clients.

VCB fails with custom pre-freeze script error

LGTsc14530

Due to a known limitation with VMware, VCB backup of a Solaris virtual machine may fail due with the error of “Custom pre-freeze script failed,” even though no customization is made to the pre-freeze script.

This limitation has been fixed in ESX 3.5 Update 2.

CLI problems and limitations descriptions

Running nsravtar directly from the command line might fail

LGTsc25711

Running **nsravtar** directly from the command line might fail if the following environment variable was not updated:

LD_LIBRARY_PATH

Workaround

Add */usr/lib/nsr*to the LD_LIBRARY_PATH environment variable.

Savegroup initiated with “@” symbol at beginning of name does not trigger desired group

LGTsc23714

When a savegroup with the "@" symbol at the beginning of the name is initiated from the command line or from NMC, the default group will be triggered instead of the specified savegroup. The "@" symbol is being interpreted as a special flag/option, not as part of the savegroup name.

Workaround

Do not use the "@" symbol at the beginning of a savegroup name.

AFTD direct file recover option may yield incomplete volume information

LGTsc10723

Recovering data from AFTD volumes using direct files recovery method will not update the "read" information in the volume record. As a result, the **mminfo** command will incorrectly display the "read" data as 0.

For example, the command, **mminfo -a -r** "written, read, volume" might yield results similar to the following:

```
written read volume
99 KB 0 KB trout.legato.com.002
0 KB  0 KB trout.legato.com.002.RO
```

Configuration problems and limitations descriptions

Cannot configure Windows Firewall Support in the NetWorker Installation wizard

LGTsc26202

The option to configure Windows Firewall support does not appear in the NetWorker Installation wizard under the following conditions:

- The Windows Firewall Service is not turned on.
- Windows Firewall is not supported for a particular Windows operating system.

The Windows Firewall Service is turned on and enabled by default on the following Windows operating systems:

- Windows XP SP2 and later
- Windows 2008

Note: Windows Firewall is not supported on Windows 2000.

Workaround

The Windows Firewall service is turned off by default on Windows Server 2003.

To turn on the firewall service on:

1. Ensure that Service Pack 1 or later has been installed. This Service Pack is required for Windows Firewall support.
2. Start the Windows Firewall/ICS service.

NMC cannot connect to GSTDB if EMC AlphaStor or EMC DPA is installed

LGTpa94658

By default, the NetWorker Console database uses port 2638 for TCP/IP communications. Other applications may also use this port or, as is the case with EMC AlphaStor or EMC DPA installed with default options, may have their own instance of the iAnywhere database installed, which can create conflicts if both applications are installed on the same host.

Workaround

To change the service port used by the NetWorker Console database:

1. Stop the GST Service.
2. Stop any other products that are using the iAnywhere database, for example EMC AlphaStor or EMC DPA.
3. Ensure that no **dbsrv9** processes are running. If the **dbsrv9** processes are running, stop them.
4. Open a terminal or command prompt window.
5. Depending on the shell you are using, use the appropriate command (for example. **setenv** for csh, **export** for sh) to update the library path environment variable in the terminal window to the following locations:
   - Solaris: **/opt/LGTOnmc/bin:/opt/LGTOnmc/sybasa/lib**
   - Linux/AIX/HPUX: **/opt/lgtonmc/bin:/opt/lgtonmc/sybasa/lib**
   - Microsoft Windows (assumes default installation location): **C:\Program Files\EMC NetWorker\Management\GST\sybase\bin**

   The environment variable to set varies by platform, for example:
   - Solaris/Linux: LD_LIBRARY_PATH
   - AIX: LIBPATH
   - HP-UX: SHLIB_PATH
6. Edit the **gstd.conf** file to add or change the following line:

   db_svc_port=*port_number*

   For example:

   db_svc_port=2639

   The **gstd.conf** is located in the following locations:
   - Solaris: /opt/LGTOnmc/etc
   - Linux/AIX/HP-UX: /opt/lgtonmc/etc
   - Microsoft Windows: C:\Program Files\EMC Networker\Management\GST\etc
7. Run the **gstconfig** command to update the port value in the NetWorker Console. The **gstconfig** command is located in the following locations:
   - Solaris: /opt/LGTOnmc/bin

- Linux/AIX/HP-UX: /opt/lgtonmc/bin
- Windows: C:\Program Files\EMC NetWorker\Management\GST\bin

8. Close the terminal or command prompt window, then restart the GST Service.

NetWorker Console unable to generate reports in pure IPv6 environment

LGTsc23081

The NetWorker Console is unable to generate reports when deployed in a pure IPv6 environment due to a Sybase iAnywhere 9 limitation.

Relabelling volume after deleting remote client resource does not result in purge of file index

LGTsc18543

The file index of a remote client cannot be purged by relabelling a volume after deleting the remote client resource.

The file index of the remote client can be purged (for the volume ID) by relabelling a volume when the remote client is a current valid client resource.

Workaround

Run **nsrck -L 3** from the command line to purge the file index.

Do not perform client backups using temporary IPv6 addresses

LGTsc11811

Temporary or randomly generated IPv6 TCP/IP addresses are not supported in NetWorker. If the address for a client is not stored in DNS or in a hosts file and has not been added to the client resource, NetWorker will be unable to back up the client.

Devices and media problems and limitations descriptions

Multiplexing must be disabled for save sets to be cloned from the DXi/DL3D using NDMP path-to-tape

LGTsc28059

Multiplexing of save sets is not supported for save streams that are to be cloned from the Dxi/DL3D with the NDMP path-to-tape feature.

Note: Only volumes created without multiplexing can be used with the NDMP path-to-tape feature.

Workaround

Device properties must be set to disable multiplexing capability.

To disable multiplexing of save sets:

1. From NMC on the NetWorker server, select **Devices**.
2. For each configured target device on the DL3D or Dxi:

a. Select **Device › Properties**.

b. Click the **Configuration** tab.

c. Set **Target sessions** to **1**.

d. Set **Max sessions** to **1**.

e. Click **OK**.

Note: Backup performance may be affected by disabling multiplexing of save sets.

Tapes left in "Ejecting" state after labelling large number of volumes in a Windows virtual environment

LGTsc27571

After labelling a large number of virtual volumes over a large number of virtual drives in a Windows 2008 environment, some tapes may be left in the "Ejecting" state without being removed from the drive.

Workaround

Select **Diagnostic Mode** within NMC (**View › Diagnostic Mode**), then perform the following:

1. In the **Devices** pane, highlight the affected library.
2. Right-click the library and select **Properties**.
3. Click the **Advanced** tab.
4. In the **Jukebox features** selection box, select the **autoeject** feature.
5. Click the **Timers** tab.
6. Set the **load sleep**, **unload sleep**, and **eject sleep** values to **0**.
7. Click **Save** to save the changes.

Note: You may be required to disable and re-enable the jukebox for changes to take effect.

Raw disk backup and restore not supported on NetWorker with Microsoft Windows 2008

LGTsc17146

NetWorker does not support backup and restore of raw disks with Windows Server 2008.

Inquire command does not detect tape drive on HP-UX

LGTsc07321

When you attach a tape drive to the HP-UX 11i V2 64-bit host and run the **inquire** command, the tape drive is not detected, even though the device was configured, labelled and mounted and a save was successful.

Workaround

Identify the drive path in the /dev/rmt folder, and using this path configure the device, as usual.

Whenever a new device is attached to the system, ensure that the cached file /tmp/lgto_scsi_devlist is updated. Remove this temp file and then run the **inquire** command, which will rebuild the file.

GUI problems and limitations descriptions

Querying large numbers of save sets in the NetWorker user interface may cause a Java heap space error

LGTsc27106

Querying large numbers of save sets in the NetWorker user interface may fail with a Java heap space error.

Workaround

Increase the Java heap size used by the NMC application:

1. On the Console server host, open the gconsole.jnlp file in a text editor. The gconsole.jnlp file is located in:

   ‹Console_install_dir›\web

2. Increase the default **max-heap-size** value from 700MB to 1400MB. For example,

```
<resources>
<j2se version="1.6+" initial-heap-size="64M"
max-heap-size="1400M"/>
```

Note: To provide meaningful query results and to reduce the chance of encountering this error, narrow the save set search criteria by specifying selection parameters.

Cannot dismiss events in the events table until the event is resolved

LGTsc12061

Events cannot be dismissed or hidden in the events table until the event is resolved or has finished.

A user cannot be a member of more than 512 groups

LGTsc08415

A user cannot be a member of more than 512 groups when running any operation with NetWorker. If the user is a member of more than 512 groups, the following message appears:

> Maximum number of groups exceeded, some groups may be dropped from the credential. Number of groups the user belongs to: XXX, maximum number of groups supported: 512

Installation problems and limitations descriptions

NetWorker installation directory path longer than 160 characters returns error, but installation still completes successfully

LGTsc17805

In Windows 2003, when a NetWorker installation directory path is longer than 160 characters, an error message appears during installation. However, if you click **OK** in the error message dialog box, the installation completes successfully. The NetWorker software is then installed in a new directory where the name is the first 160 characters of the folder selected during installation.

The longest pathname currently supported by NetWorker is 160 characters.

Licensing problems and limitations descriptions

Inconsistent license information displayed for NDMP Workstation Client

LGTsc26673

If an IP address is specified in the NDMP Array name attribute of the NetWorker client resource, the license information displayed for the WORKSTATION CLIENT TYPE may be incorrect. NetWorker client license information can be displayed with the **nsrlic –v** command. In this case, the license information displayed for the NDMP CLIENT LICENSES is correct. However, the information displayed for the WORKSTATION CLIENT TYPE may be incorrect.

License Conformance Summary displays incorrect base license type

LGTsc26210

The License Conformance Summary, accessed through the Configuration tab of the **NetWorker Administration** window, incorrectly displays the base license type as "Eval" when it should be "Data Backup Utility".

Localization problems and limitations descriptions

More information on localization important notes and tips is provided in "Internationalization support" on page 199.

Non-ASCII hostnames are not supported by NetWorker

LGTsc26980

NetWorker does not support hosts that have non-ASCII characters in the hostname.

In a non-English environment, the character encoding used for the NMC client and NetWorker client must be the same

LGTsc21657

In a non-English environment, characters do not display correctly if the character encoding is different on the NMC client than the files on the NetWorker host that are being browsed.

Workaround

In a non-English environment, ensure that the NMC client uses the same character encoding as the files on the NetWorker client host that are to be browsed. For example, if the NMC client uses the zh_CN.EUC locale it will not properly display files that were created using the zh_CN.UTF-8 locale.

The character encoding used for the NMC client and NetWorker client must be the same to ensure the proper display of characters. In this example, the NMC client should be started using the zh_CN.UTF-8 locale.

JRE 1.6 users cannot export reports as PDF documents for non-English locales on AIX and HPUX

LGTsc26288

The NetWorker option to export reports in Acrobat PDF format is not supported on AIX and HPUX hosts that are running JRE 1.6 in a non-English locale.

Messaging problems and limitations descriptions

Savegroup completion report output contains additional, unnecessary information

LGTsc31111

Upon completion of a NetWorker 7.2.x client savegroup backup on NetWorker servers 7.3 and later, the following additional information is added to the output of the savegroup completion report. This additional information is unnecessary and can be ignored:

```
type: NSR client description;
pools supported: Yes;
browse time supported: Yes;
multiple balanced streams supported: Yes;
remote user: <NetWare_User>;
arch: NetWare IA32;
client OS type: NetWareOS;
CPU type: Intel Pentium;
CPUs: 2;
kernel arch: Intel Pentium;
machine type: server;
MB used: 57221;
NetWorker version: nwnc_7_2;
OS: NetWare IA32 6;
version: nwnc_7_2;
save set: path="<Save_Set_Name>:", level=full, diskno=0,
   max_sessions=1,
stype=save ;
parallelism: 8
V <NetWare_client_Name>: <NetWare_save_set_name>: level=6,     8360 MB
   00:09:34  21096 files
  <NetWorker_Server_Name>: index:<NetWare_client_Name>  level=6, 47 MB
   00:00:03 56 files
```

Single step recovery of a full virtual machine: some error messages are cyptic

LGTsc26965

During the single step recovery of a full VMware virtual machine, some error messages may appear to be cryptic. These error messages are generated by the Vmware converter product. The error messages may refer to the underlying function name rather than the cause or required solution. The following is an example of one such error message:

```
70047:winworkr: Retore failed with error P2VError
IMPORT_DEST_INSUFFICIENT_SPACE()
```

The previous error message was generated because there was insufficient space in the staging location that was specified for the single step recovery.

Single step recovery of a full virtual machine: some messages are non-standard

LGTsc27063

During the single step recovery of a full VMware virtual machine, some messages may appear to be non-standard. These messages are generated by the VMware converter product. The following is an example of such messages:

```
[2009-02-17 14:27:37.380 'Libs' 4380 info] HOSTINFO: Seeing Intel CPU,
numCoresPerCPU 4 numThreadsPerCore 1.
[2009-02-17 14:27:37.380 'Libs' 4380 info] HOSTINFO: This machine has
   2 physical CPUS, 8 total cores, and 8 logical CPUs.
[2009-02-17 14:27:37.802 'Libs' 4380 info] System libeay32.dll library
   is older than our library (90709F < 9070AF)
[2009-02-17 14:27:49.850 'Libs' 4380 warning]
SSLVerifyCertAgainstSystemStore: Subject mismatch: VMware vs
   10.31.236.60
[2009-02-17 14:27:49.850 'Libs' 4380 warning]
SSLVerifyCertAgainstSystemStore: The remote host certificate has these
   problems:
* The host name used for the connection does not match the subject name
   on the host certificate
* A certificate in the host's chain is based on an untrusted root.
[2009-02-17 14:27:49.850 'Libs' 4380 warning] SSLVerifyIsEnabled:
   failed to open the product registry key. Assuming verification is
   disabled. LastError = 0
[2009-02-17 14:27:49.850 'Libs' 4380 warning]
SSLVerifyCertAgainstSystemStore: Certificate verification is disabled,
   so connection will proceed despite the error p2vTool version 3.0.3
   build-89816
```

mminfo query ignores “!” on non-boolean fields

LGTsc22735

Performing an **mminfo** query with “!” (for example, if you run **mminfo -q "!client=hydra"**) should exclude all save sets for the client hydra. However, **mminfo** ignores the “!” and returns all save sets for the specified client.

Performance problems and limitations descriptions

nsrjobd may consume large amount of memory depending on backup environment

LGTsc21253

The **nsrjobd** daemon runs on the NetWorker server and is responsible for monitoring NetWorker activity during a backup or recovery operation. Be aware that, depending on the size of your backup environment, **nsrjobd** can require large amounts of RAM.

NetWorker programs may experience delays on SuSE Linux Enterprise Server version 9.x using IPv6

LGTsc19690

NetWorker programs may experience a start up delay on a SuSE Linux Enterprise Server (SLES) version 9.x using IPv6 in either a single stack or dual stack (IPv4/IPv6) environment. This situation may occur if the Scope:Link IPv6 address of the Linux host network interface is not included in the /etc/hosts file.

To determine the Scope:Link address of the host network interface, run the **ipconfig** command from the host's command line. In the following example, the host named geo1 has a network interface named eth0, which has a Scope:Link address of fe80::2c0:4ff:fe68:c24/64:

```
geo1> ifconfig
eth0      Link encap:Ethernet  HWaddr 00:C0:4F:68:C2:4F
          inet addr:192.168.0.1 Bcast:10.5.163.255  Mask:255.255.254.0
          inet6 addr: 3ffe:80c0:22c:74:2c0:4ff:fe68:c24/64 Scope:Global
          inet6 addr: fe80::2c0:4ff:fe68:c24/64 Scope:Link
          inet6 addr: 2001:abcd:0:1001:2c0:4ff:fe68:c24/64 Scope:Global
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:137451625 errors:0 dropped:0 overruns:0 frame:0
          TX packets:13840698 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:1834082191 (1749.1 Mb)  TX bytes:69705018 (66.4 Mb)
          Interrupt:19 Base address:0xdc00
```

Workaround

Add the Scope:Link address of the host network interfaces to the /etc/hosts file on the affected NetWorker client. The following example shows how an entry in the /etc/hosts file might appear:

```
# Scope:Link address
fe80::2c0:4ff:fe68:c24 geo1.fss.dcp.com geo1
```

Restore problems and limitations descriptions

Recovering client file index fails if NDMP attribute is selected on client resource

LGTsc24329

Recovering the client file index for a NetWorker client will fail if the NDMP attribute is set on the client resource.

Workaround

Before using the **nsrck -L7** command to recover a client file index, ensure that the NDMP attribute is not selected in the corresponding NetWorker client resource. After the client file index is recovered, you can once again select the NDMP attribute on the client resource.

Single step recovery of a full virtual machine: VCB restore must use Virtual Center IP/name and password/username combination if Virtual Center used for backup

LGTsc27447

When a VMware Consolidated Backup (VCB) is performed using Virtual Center (for example, if the config.js file contains Virtual Center as the Host and its credentials), then the restore must be performed using the Virtual center IP (or its fully qualified domain name) with its credentials. Similarly, this process should be followed when performing a VCB restore using the ESX server, otherwise the restore will fail with an error message indicating "unknown path."

Single step recovery of a full virtual machine: Validation of the VC/ESX server credentials are validated once the NetWorker recover completes

LGTsc26268

The VC/ESX server credentials are validated once the NetWorker recover operation completes:

If wrong user credentials are entered, the following might occur:

- The restore operation fails after the completion of the NetWorker recover operation.
- The user must wait until the NetWorker software completes the recover operation before being notified that a wrong credential was entered.
- For a large save set, the NetWorker recover operation will take a longer time to complete depending upon the size of the save set. Notification of wrong ESX/VC credentials happens after the NetWorker recover operation completes.

Workaround

Ensure that you enter the proper user credentials to avoid long response time for the following operations:

- VC/ESX server credentials validation. This task is performed in the later stages of a VCB restore operation.
- Before performing a VMware Consolidated Backup (VCB) restore operation. The validation of wrong credentials might cause longer response times.

Single step recovery of a full virtual machine: cannot specify CIFS path for staging location

LGTsc27559

When performing a single step restore of a full VMware virtual machine, the staging location you specify cannot be a Common Internet File System (CIFS) path. The recovery will fail with an error message similar to one of the following:

Error 1:

```
Recovering files of client 'langre-rh-1.takman.com' from
server '11.32.64.115'.
Total disk space available for recover is 0 KB.
Total disk space needed for recover is 2304 MB.
67854:winworkr: Failed to recover save sets: Recover failed due to low
   disk space!..
```

Error 2:

```
Recovering files of client 'langre-rh-1.takman.com' from
server '11.32.64.115'.
70483:winworkr: Staging location Z:\rack2 is in use by other process.
Select new staging location or delete the staging location Z:\rack2
manually.
Restore of virtual machine failed!...
```

nsrck -L7 -t must be performed with additional steps in order to recover client index with save sets passed browse period

LGTsc12672

The **nsrck -L7 -t** command can no longer be used solely to perform a recovery of a client index where save sets have passed the period identified in the browse policy.

The following operations must be performed in addition to running the **nsrck** command on the save sets in order to recover the index information:

1. Identify a save set containing the index for the desired time/client.
2. Adjust the retention of the identified client file index to a date in the future.
3. Change the mode to **notrecyclable** for the identified client file index.
4. Identify the save sets required to browse (for example, the full backup and all the following incremental backups prior to the desired date).
5. Set a new retention period for each of the individual save sets to a date in the future.
6. Change the mode to **notrecyclable** for each of the individual save sets.
7. Run the **nsrck -L7 -t** command.
8. Browse the save sets and perform the recover as usual.

Ctime attribute does not get modified on AIX version 5.3 and later, Mac OS X version 10.4 and later

LGTsc20723

When a file is renamed on AIX version 5.3 and later or Mac OS X 10.4 and later, the **ctime** attribute is not modified. The **ctime** attribute is the timestamp NetWorker uses to determine whether a file has been modified when performing a non-full backup. If renaming files on AIX version 5.3 and later or Mac OS X 10.4 and later, perform a full backup to ensure recovery of the renamed files.

Security problems and limitations descriptions

Authentication error appears when NetWorker connecting to client

LGTsc21704

When trying to connect to a client to browse the client's file system, NetWorker displays the error message "Authentication failed or no valid authentication methods supported by both client and server".

Workaround

If this error message appears, search the daemon log file for more information and instructions.

Upgrading problems and limitations descriptions

When upgrading to NetWorker release 7.5 on Windows, you might need to reboot the system

LGTsc24358

When upgrading to NetWorker release 7.5 on Windows from a previous release of NetWorker software, you might need to reboot the system.

New client's global attributes do not inherit existing client values after upgrading NMC

LGTsc24076

After upgrading to the latest version of NMC and launching the Console for the first time, the **Configuration** window appears, prompting you to set the configuration for the Console and to add NetWorker servers. In the **Set Database Backup Server** page, the checkbox **Create client resource on this server** is selected by default. If you click **Finish** with this checkbox selected, the NetWorker software disables the client's global attributes archive services, hard links, and short filenames if enabled prior to the upgrade when the new client resource is created.

Workaround

Clear the checkbox **Create client resource on this server**.

NetWorker releases previous to 7.5

Table 18 on page 145 identifies problem issues and limitations discovered previously to NetWorker release 7.5

The known limitations are separated into the following categories:

- "Archiving problems and limitations descriptions" on page 149
- "Backup problems and limitations descriptions" on page 150
- "CLI problems and limitations descriptions" on page 154
- "Cloning and Staging problems and limitations descriptions" on page 157
- "Compatibility problems and limitations descriptions" on page 157

- "Configuration problems and limitations descriptions" on page 158
- "Devices and Media problems and limitations descriptions" on page 159
- "GUI problems and limitations descriptions" on page 162
- "Installation problems and limitations descriptions" on page 163
- "Licensing problems and limitations descriptions" on page 165
- "Localization problems and limitations descriptions" on page 165
- "Messaging problems and limitations descriptions" on page 166
- "NetWorker support for Novell's OES Linux limitations" on page 168
- "NetWorker Management Console problems and limitations descriptions" on page 170
- "Restore problems and limitations descriptions" on page 171
- "Upgrading problems and limitations descriptions" on page 175

Table 18 Limitations discovered in NetWorker releases previous to 7.5 (page 1 of 5)

Issue number	Description of limitation	Operating system affected	Product feature
"LGTsc05166" on page 149	DiskXtender Data Manager file systems get archived on NetWorker.	Windows	archiving
"LGTsc20517" on page 150	For each NetWorker client that is BMR-enabled, set the save set attribute in the client resource to ALL.	Linux, Windows Solaris	Backup
"LGTsc19514" on page 150	Delay in cancelling savegroups in NMC for BMR-enabled clients.	Linux, Windows, Solaris	Backup
"LGTsc16575" on page 150	A backup might fail for CIFS shares on Microsoft Windows hosts.	Windows	Backup
"LGTsc17703" on page 151	How to back up a NetWorker Windows client that has multiple domains that are part of both an AD domain, and a DNS domain.	Windows	Backup
"LGTsc10292" on page 151	Incorrectly configured NPS role results in failed backup of VSS SYSTEM SERVICES of Windows Server 2008.	Windows	Backup
"LGTsc11914" on page 151	Active Directory Lightweight Directory Services backup fails for Windows 2008 client.	Windows	Backup
"LGTsc14956" on page 152	Not all drives in a VCB file level backup are browsable.	Windows	Backup
"LGTsc15236" on page 152	Incorrect error during recovery of VCB backups.	Windows	Backup
"LGTsc12970" on page 153	Backups of /dev directory fail in HP-UX 11i v3 on PA_RISC and IA64.	AIX, Solaris, HP-UX, Tru64 UNIX	Backup
"LGTsc06312" on page 153	The **nsr_render_log** program does not accept input from STDIN.	AIX, Solaris, HP-UX, Tru64 UNIX	Backup
"LGTsc09257" on page 153	A user cannot be a member of more than 512 groups.	All	Backup

Table 18 Limitations discovered in NetWorker releases previous to 7.5 (page 2 of 5)

Issue number	Description of limitation	Operating system affected	Product feature
"LGTpa91475" on page 153	The **savepnpc** command fails if the precommand and post command contains any non-ASCII characters.	All	Backup
"LGTsc00850" on page 154	Restrictions associated with the ZFS file system.	AIX, Solaris, HP-UX, Tru64 UNIX	Backup
"LGTsc19916" on page 154	The contents of the /opt, /var, /etc directories are not excluded when the -B option is used.	Linux, Windows, Solaris	CLI
"LGTsc09483" on page 154	Not all save sets listed after running mminfo command with dedupe option.	Solaris	CLI
"LGTsc19402" on page 155	The -e *exclude file* option behaves differently for files and directories.	Linux, Windows, Solaris	CLI
"LGTsc19084" on page 155	The recover -e *exclude file* option does not support NDMP file systems.	All	CLI
"LGTsc19405" on page 156	No filename checks for remote clients when using the --e *exclude file* option with a directed recovery operation.	Linux, Windows, Solaris	CLI
"LGTsc10665" on page 156	Cannot view log files created with the **nsr_render_log** command.	All	CLI
"LGTsc06809" on page 156	Clients running pre-7.4 releases cannot use the **mminfo -N** command to query save set names longer than 255 bytes.	All	CLI
"LGTpa95406" on page 156	The **jbverify** command is not supported on Solaris 10.	AIX, Solaris, HP-UX, Tru64 UNIX	CLI
"LGTsc15337" on page 157	Marking volumes as Recyclable might slow system performance.	All	Cloning and Staging
"LGTsc19401" on page 157	Removable Storage Manager (RSM) not supported.	All	Compatibility
"LGTsc20557" on page 157	The Homebase Agent is not supported in a Cluster environment.	Linux, Windows, Solaris	Compatibility
"LGTsc14700" on page 158	Support for Windows Change Journal Manager with Microsoft Windows 2008.	Windows	Compatibility
"LGTsc18397" on page 158	Cannot set nsrdir parameter for virtual server using remote Microsoft Management Console (MMC).	Windows	Configuration
"LGTsc06585" on page 158	Running the Linux 64 bit package with the 2.6.x kernel may result in crashes.	Linux	Configuration
"LGTsc19241" on page 159	For Microsoft Windows Server 2008 raw devices are not saved under the virtual client's index.	Windows	Devices and Media
"LGTsc19676" on page 159	Broker connects to first available storage node if no device or mmd available on first host.	Solaris	Devices and Media
"LGTsc11158" on page 160	Cannot create an advanced file-type device on a remote storage node device.	All	Devices and Media
"LGTsc10950" on page 160	VMware Consolidated Backup 1.0.x is not supported on Windows Server 2003, Enterprise Edition (x64) Service Pack 2.	Windows	Devices and Media

Table 18 Limitations discovered in NetWorker releases previous to 7.5 (page 3 of 5)

Issue number	Description of limitation	Operating system affected	Product feature
"LGTsc06358" on page 160	NetWorker becomes unresponsive when attempting an invalid clone operation.	All	Devices and Media
"LGTsc01923" on page 160	Cannot query UNIX non-ASCII save sets in NMC.	AIX, Solaris, HP-UX, Tru64 UNIX	Devices and Media
"LGTpa93001" on page 160	Virtual tapes are listed as "full" after mounting.	Windows	Devices and Media
"LGTpa88188" on page 161	Scan for Devices configures all devices as a regular storage node device.	All	Devices and Media
"LGTsc01446" on page 161	The Virtual Jukebox attribute for a CDL virtual tape library is not automatically set after upgrading to release 7.4.	All	Devices and Media
"LGTsc10295" on page 162	dedup recover sessions do not display in the NMC GUI.	All	GUI
"LGTsc08756" on page 162	Text searched for in the NetWorker Console Help program does not get highlighted correctly if using JRE 1.5.x for Asian languages.	Solaris	GUI
"LGTsc00365" on page 162	On HP-UX the NetWorker Server window does not appear.	All	GUI
"LGTsc01115" on page 162	Cannot copy and paste Japanese characters using NMC.	All	GUI
"LGTpa95162" on page 162	Newly created groups are not displayed by the NetWorker Console GUI after moving system date back in time.	Linux, AIX, Solaris, HP-UX, Tru64 UNIX	GUI
"LGTpa96168" on page 163	Cannot launch NetWorker Console Help program on Solaris 10 with a JRE earlier than version 1.5.0_09.	AIX, Solaris, HP-UX, Tru64 UNIX	GUI
"LGTsc16831" on page 163	For Microsoft Windows, ensure that the HomeBase Agent software installed in the same installation path as the NetWorker software.	Windows	Installation
"LGTsc18641" on page 164	Before restoring the base profile, manually edit the fields in the recovery-configuration.xml file.	Linux, Windows, Solaris	Installation
"LGTsc18925" on page 164	Unable to launch the NetWorker Dashboard software with NetWorker release 7.4 Service Pack 3.	Windows	Installation
"LGTsc15490" on page 165	Linux upgrade using **rpm -Uvh** not working correctly (fixed in NetWorker 8.0 SP2)	Linux	Installation
"LGTsc19388" on page 165	NetWorker and the HomeBase Agent (BMR) licenses work independently.	Linux, Windows, Solaris	Licensing
"LGTsc05879" on page 163	NMC version 3.4 and NWD version 1.0 cannot be installed on the same host.	All	Localization
"LGTsc06280" on page 161	Inventory operation in Software Administration wizard delays for unreachable clients.	AIX, Solaris, HP-UX, Tru64 UNIX	Localization
"LGTsc05166" on page 149	DiskXtender Data Manager file systems get archived on NetWorker.	Windows	Localization
"LGTsc02862" on page 204	The NMC Japanese Online Help displays incorrect characters on Linux systems.	Linux	Localization

Table 18 Limitations discovered in NetWorker releases previous to 7.5 (page 4 of 5)

Issue number	Description of limitation	Operating system affected	Product feature
"LGTsc02808" on page 204	The nwrecover program will not start on Linux platforms for Asian Languages if the necessary fonts are not installed.	Linux	Localization
"LGTsc05339" on page 204	Recovering a large number of files may take a long time in the French locales on Solaris.	Solaris	Localization
"LGTsc03894" on page 205	Garbled characters may appear in the NetWorker Console GUI font list on Solaris.	Solaris	Localization
"LGTsc02814" on page 205	Problem with highlighted text in the NetWorker Console Help program after performing a search using JRE 1.5.x for Asian languages.	Solaris	Localization
"LGTpa88887" on page 205	Entering non-ASCII characters in NetWorker user interfaces.	All	Localization
"LGTpa92833" on page 205	Non-ASCII save set names are displayed incorrectly in nsradmin visual mode on Linux.	Linux	Localization
"LGTsc16423" on page 166	nsrbmr does not give proper error messages under certain conditions.	Linux, Windows Solaris	Messaging
"LGTsc17737" on page 167	Error message does not display for annotations with similar characters at end.	Windows	Messaging
"LGTsc08054" on page 167	Erroneous error message may be generated by Linux operating systems when performing an I/O to a volume.	Linux	Messaging
"LGTsc08978" on page 167	New pdksh package required on SuSE 10 x86.	Linux	Messaging
"LGTsc03478" on page 168	Incorrect error message reported when starting the NetWorker console on Red Hat 64-bit Enterprise Server 4.	AIX, Solaris, HP-UX, Tru64 UNIX	Messaging
"LGTsc06288" on page 168	Error states you need to perform an uninstall when updating from NetWorker 7.2.2 32-bit to NetWorker 7.5 64-bit.	All	Messaging
"LGTsc02903" on page 170	NetWorker Management Console may become unresponsive when opened using Exceed.	AIX, Solaris, HP-UX, Tru64 UNIX, Linux	NMC
"LGTsc19364" on page 171	Last-modified date changed for files recovered to Sun Cluster global file system.	Solaris	Restore
"LGTsc10796" on page 171	Do not recover identical save sets with different ssids to the same target directory.	AIX, Solaris, Windows, Tru64 UNIX, Linux, HP-UX	Restore
"LGTsc14577" on page 172	NetWorker interactive recover does not recover the registry and the com+ regdb writers.	Windows	Restore
"LGTsc11618" on page 172	Restoring full VM image on ESX server fails.	Linux	Restore
"LGTsc11734" on page 172	Unable to restore files encrypted with both Microsoft Windows Encrypting File System & AES encryption.	Windows	Restore
"LGTsc06577" on page 173	The **nwrecover** program might fail to launch on a Solaris Sparc V240 server.	AIX, Solaris, HP-UX, Tru64 UNIX	Restore

Table 18 Limitations discovered in NetWorker releases previous to 7.5 (page 5 of 5)

Issue number	Description of limitation	Operating system affected	Product feature
"LGTsc05990" on page 173	FSRM Disk Quota may not be restored to previous settings after recovery.	All	Restore
"LGTsc20558" on page 173	After a BMR recovery operation the root password might change.	Linux, Windows, Solaris	Restore
"LGTpa95900" on page 173	On NetApps files, filenames ending with special characters might be renamed.	Windows	Restore
"LGTpa94966" on page 174	The **winworkr** program fails to retrieve successfully archived files if a slash (\) character was entered in the annotation string.	Windows	Restore
"LGTpa83927" on page 174	Directed recover using the CLI fails with permission errors on Windows.	Windows	Restore
"LGTsc00167" on page 174	The **winworkr** program will not relocate to a partition not existing on the initiating host if the NetWorker server is running release 7.4 and the client is running release 7.2.	Windows	Restore
"LGTsc05053" on page 175	Performing a save set query can take a long time if the query parameter in the Query Save Set tab is set to "Save Time" and From and To calendars for 3 or more days.	All	Restore
"LGTpa96554" on page 175	For recoveries operations using Celerra filers, misleading error messages might display.	All	Restore
"LGTsc08958" on page 175	JRE version mismatch causes authentication failure, stops GSTD.	Linux	Upgrading
"LGTpa95019" on page 176	When upgrading from release 7.3.1 the Virtual jukeboxes attribute will not be set correctly.	Windows	Upgrading
"LGTsc01587" on page 176	Group details window is empty after upgrading from NetWorker release 7.2.2.	All	Upgrading

Archiving problems and limitations descriptions

DiskXtender Data Manager file systems get archived on NetWorker

LGTsc05166

On the Data Manager file system for Windows, when you perform a client or server initiated archive of the file system containing the file stubs (or if you archive the file stubs themselves), file systems managed by the DiskXtender Data Manager are archived by NetWorker, and no error message is displayed. With DiskXtender running on UNIX, NetWorker properly fails the archiving and reports the error.

There are several problems that may result from the archive:

- If an archive is scheduled with grooming, this may cause the file stubs to be deleted.
- If an archive retrieve is performed, the existing file stubs may be overwritten.
- If the DX schedule is running after grooming, the file on the media server may be deleted.

Backup problems and limitations descriptions

For each NetWorker client that is BMR-enabled, set the save set attribute in the client resource to ALL

LGTsc20517

If the extended profile is not backed up as part of the NetWorker data set, a recovery or migration of the source to the target system cannot be performed.

For each NetWorker client that is BMR-enabled, set the **save set** attribute in the client resource to **ALL**. This ensures that the extended profile is part of NetWorker data backup.

The location of extended profile differs for Microsoft Windows and UNIX:

- Microsoft Windows: *NetWorker_install_path\HomeBaseAgent\history*
- UNIX: */opt/homebase-agent/history*

Note: Where *NetWorker_install_path* is the location of the NetWorker installation files.

Delay in cancelling savegroups in NMC for BMR-enabled clients

LGTsc19514

Stopping a savegroup from NMC when there are BMR clients enabled for profiling does not result in the savegroup being cancelled immediately. The clients with BMR-enabled must wait until the profiling jobs complete before the savegroup is cancelled. Once the profiling completes, the savegroup is cancelled and subsequent savegroups for the clients will not be triggered.

A backup might fail for CIFS shares on Microsoft Windows hosts

LGTsc16575

A backup might fail for CIFS shares on a Microsoft Windows host. When **nsrexecd** is started as a service (context account), it cannot obtain the CIFS path because of access restrictions to its security credentials from the NetWorker client (**nsrexecd**). By default, **nsrexecd** starts as a service under the SYSTEM account that does not have the correct permissions to access the CIFS share.

A message similar to the following appears:

```
save: \\10.31.73.80\bluenose\sam\t1.txt: "No such file or directory"
```

Workaround

To work around this issue:

1. Create an account on the NetWorker client machine with the same username and password as an account with permissions to the CIFS shares.
2. Perform one of the following backup operations:
   - Back up the CIFS shares save set:
     a. Edit the Client resource for the NetWorker client that is backing up the CIFS share:

        - For the **Remote User** attribute, type the username from step one.

- For the **Password** attribute, type the password from step one.

b. Use the **savegrp** command to backup the CIFS shares save set from the command line. For example:

```
# savegrp client_name -G group_name
```

- Back up the CIFS shares:

a. Ensure that the NetWorker client is connected to the CIFS share. For example:

Run a command shell that:

- Has a mapped share with *net use* *IP_address**share.*

-Is connected with the username and password that has access to the CIFS share.

b. Use the **Save - L** command to back up the CIFS shares. For example:

```
# Save -L
```

How to back up a NetWorker Windows client that has multiple domains that are part of both an AD domain, and a DNS domain

LGTsc17703

To back up a NetWorker Windows client that has multiple domains that are part of both an AD domain and a DNS domain, perform one of the following steps:

- Define the AD domain name, which is the Full Computer Name, in the NetWorker server's **/etc/hosts** file.
- Define the AD domain, which is the Full Computer Name, in the Active Directory DNS. Also, on the NetWorker server, open the Client resource and add the Full Computer Name in the alias list.

Incorrectly configured NPS role results in failed backup of VSS SYSTEM SERVICES of Windows Server 2008

LGTsc10292

Due to a problem identified by Microsoft with Windows Server 2008, an incorrectly configured Network Policy Server (NPS) results in the writer incorrectly reporting files to the NetWorker software. As a result, the backup of the VSS SYSTEM SERVICES fails.

The Microsoft defect number for this issue is 872233.

Active Directory Lightweight Directory Services backup fails for Windows 2008 client

LGTsc11914

When running a scheduled backup of a save group which includes a Windows 2008 client configured with Active Directory Lightweight Directory Services (AD LDS), the backup may fail with the following error:

```
VSS USER DATA:\ VSS USER DATA: ERROR: VSS failed to process snapshot,
error=0x800423f4. The VSS writer operation failed because of an error
that might recur if another shadow copy is created.
```

There will also be ADAM Writer errors in the Application Event Log that correspond to the time of the save of the ADAM component.

Workaround

To avoid this problem, increase the **Client Retries** attribute on the **Advanced** tab of the Group resource. Increasing the value to 2 or 3 will resolve the problem.

Not all drives in a VCB file level backup are browsable

LGTsc14956

When performing a virtual machine restore from a file level VCB backup, only the drive letters that exist on the proxy host will be seen in the Recover window. For example, if the proxy host has only a C:\ drive and the virtual machine has a C:\, D:\ and E:\ drive, then during the restore of the virtual machine, only the C:\ drive of the Virtual machine will be displayed.

Workaround

To resolve this problem, perform one of the following:

- From the NetWorker User program:
  1. Select **Change Selection** from the **File** menu.
  2. Type the drive that you want to browse.

  Note: This workaround will need to be performed each time you change the browse time.

- From the **recover** command:
  1. Change to the root of the current directory:

     ```
     recover> cd /
     ```
  2. Change to the drive that you want to browse, for example:

     ```
     recover> cd e:
     ```
  3. Verify that you can now browse the drive:

     ```
     recover> dir
     ```

Incorrect error during recovery of VCB backups

LGTsc15236

During a file-based recovery of a VCB backup, when a drive letter (rather than a filename or directory) is identified for recovery, one of several error messages similar to the following is displayed:

`Failed to write to` *directory_location* `The directory is not empty.`

These errors occur when using either the **recover** command or the NetWorker User Program (winworkr).

Workaround

These error messages are incorrect and should be ignored.

Backups of /dev directory fail in HP-UX 11i v3 on PA_RISC and IA64

LGTsc12970

If you back up the /dev directory using a local storage node in an HP-UX 11i v3 environment on PA_RISC and IA64, the backup fails and the system freezes.

Workaround

To work around this issue:

- Do not back up the /dev directory. Do not specify Save Set ALL in the client's Save Set attribute, and do not specify save sets that include the /dev directory in the backup.
- Use a directive to exclude the /dev directory from the backup.
- Use a remote storage node.

The nsr_render_log does not accept input from STDIN

LGTsc06312

The **nsr_render_log** does not accept input from STDIN. The following error message is displayed:

```
Please provide the input log filename with the path.
```

After the error message the usage information is listed.

Workaround

Type the following command:

```
tail -f /nsr/logs/daemon.raw | nsr_render_log -
```

A user cannot be a member of more than 512 groups

LGTsc09257

A user cannot be a member of more than 512 groups when running any operation with NetWorker software. If the user is a member of more than 512 groups, the following message appears:

```
Maximum number of groups exceeded, some groups may be dropped from the
   credential. Number of groups the user belongs to: XXX, maximum
   number of groups supported: 512
```

The savepnpc command fails if the precommand and post command contains any non-ASCII characters

LGTpa91475

The **savepnpc** command fails if the precommand and post command contains any non-ASCII characters. When editing the *‹group-name›.res* file for the **savepnpc** command, the use of UTF-8 BOM characters is unsupported. Some text editors, such as Windows Notepad, include UTF-8 BOM at the beginning of the file. You need to create a UTF-8 encoded file without the UTF-8 BOM.

If you use a text editor that includes UTF-8 BOM characters, use a hex editor to remove the first 3 bytes in the UTF-8 encoded file. The UTF-8 BOM character is 3 bytes long and the value is **0xef 0xbb 0xbf**.

Restrictions associated with the ZFS file system

LGTsc00850

The following are restrictions associated with the ZFS file system:

- Only a root user with full access to ZFS directories may recover files. ZFS files can be restored to a UFS file system. When restoring ZFS files to a UFS file system, only the permission information is retained, the access control entries are not retained. If a non-root user attempts to recover a ZFS file, the recover operation will core dump.
- ZFS snapshots and the files in ZFS directories are not backed up or restored when restoring the original files. File systems must be explicitly specified in the client's save set attribute.
- Backup and recovery of raw partitions on Solaris ZFS file systems is unsupported.

CLI problems and limitations descriptions

The contents of the /opt, /var, /etc directories are not excluded when the -B option is used

LGTsc19916

During the HomeBase base profile recovery, the **exclude.NETWORKER** file is created in ‹*hombaseagent*›/install path. The **-B** option uses this exclude file and excludes the specified files and directories.

However, the **exclude.NETWORKER** file does not exclude files and directories under the following directories. Data from these directories are not recovered from the source to the target system since they might cause issues during the recovery and migration operations:

- /opt
- /var
- /etc

To recover application files installed under /var or /opt, you must manually recover the data to the appropriate directories for the application. To recover configuration files or service binaries under /etc, you must manually recover those files and directories.

Also, when a file system recover is performed using the **recover -B** option, if the extended profile is excluded the profile needs to be recovered separately. The profile by default resides on the client in *‹installdir›***HomeBaseAgent\history**.

Not all save sets listed after running mminfo command with dedupe option

LGTsc09483

When you run the **mminfo** command with the **-q dedupe** option to view save sets created using deduplication, the command does not list the following types of save sets:

- Empty save sets
- Save sets in which nothing was backed up as the result of skip directives

Such save sets are treated as regular save sets, not as deduplicated save sets.

The recover -e *exclude file* option behaves differently for files and directories

LGTsc19402

The **recover -e** *exclude file* option behaves differently for files and directories.

If the content of the exclude file has /etc/a*, the following occurs:

- Filenames that start with the character **a** are excluded.
- Directory names that start with the character **a** are excluded only when the directories are empty.
- The NetWorker recover operation looks for the entries which start with the character **a**:
  - If it is the end node in the tree, then the recover operation will exclude that entry.
  - If it is not end node in the tree, then the NetWorker software will recover the contents inside the tree.

Examples

If the content of exclude file has /etc/a*, type the following in the exclude file:

- To exclude all contents under a directory:

  *directory_name***/***

- To exclude all files and directories inside the '/':

  /*

- To avoid recovering the '/':

  /**

- To exclude all files starting with the character **a** inside '/':

  /a*

  This excludes all of the files starting with the character **a** inside '/'. It also excludes the empty directories starting with the character **a**.

- To exclude all files and empty directories inside the '/':

  /?*

The recover -e ‹exclude file› option does not support NDMP file systems

LGTsc19084

Do not use the **-e** *exclude file* option to exclude NDMP file system files and directories during a recover operation.

If the **-e** *exclude file* option is used with the **recover** command during a NDMP file system recover operation, the specified files listed with the **-e** *exclude file* option will not be excluded from the recovery and the following message will appear:

```
Total files excluded in the exclusion list is '0'
```

No filename checks for remote clients when using the *-e exclude file* option with a directed recovery operation

LGTsc19405

The NetWorker software does not validate specified exclude filenames when the **-e** *exclude file* option is used with a remote client during a directed recovery operation. The validation will not be performed because the specified exclude file is present on the target client when the recovery is invoked.

If the **-e** *exclude file* option is used with a local recover operation, the NetWorker software validates the specified exclude filename. If the file does not exist, an error message appears. This validation is limited to only local recover operations.

Cannot view log files created on a Windows on UNIX with the nsr_render_log command

LGTsc10665

When log files created on Windows operating systems are viewed on a UNIX operating system using the **nsr_render_log** command, **nsr_render_log** core dumps. View the log files created on a Windows operating system using a Windows operating system.

Clients running pre-7.4 releases cannot use the mminfo -N command to query save set names longer than 255 bytes

LGTsc06809

Clients running pre-7.4 releases cannot use the **mminfo -N** command to query save set names longer than 255 bytes. This issue is caused by the enhancement in release 7.4 for supporting longer save set names for to up to 1024 bytes (was 255 bytes in release 7.3) to accommodate non-ASCII save set names, which will take more bytes.

Workaround

There are two workarounds for this issue if you are using a pre-7.3 client:

- Do not specify **-N** option on pre-7.4 **mminfo** to query save set names longer than 255 bytes. For example, the **mminfo -avot** command can be issued, but will only display the first 255 bytes of save set name.
- Use the **mminfo -N** command with a 7.4 client to view save set names longer than 255 bytes.

The jbverify command is not supported on Solaris 10

LGTpa95406

The **jbverify** command is not supported on Solaris 10. The NetWorker software has an autoconfiguration option provided that ensures a jukebox is configured correctly.

Cloning and Staging problems and limitations descriptions

Marking volumes as recyclable might slow system performance

LGTsc15337

The following factors might slow system performance when marking a volume as recyclable.

For each volume that is to be marked as recyclable:

1. The number of save set clone instances that reside on that particular volume and are required to be marked as expired.
2. The number of clones or clone instances for each of the save set clone instances on that particular volume, that reside on other volumes.

   The number of clones that are created for a save set, equal the number of save set clone instances. Each save set clone instance has the same ssid and unique clone ID. Each save set clone instance resides on a separate volume. The first instance of backup also has a clone ID.

   Thus, the volume being marked as recyclable might contain save sets that have multiple clone instances that reside on other volumes. These clone instances need to be checked before the save sets are marked as expired. A save set, identified by the ssid, only expires when all of the clone instances, which are identified by a clone ID, expire.

To mark a volume as recyclable:

- From the server's **Administration** window, click **Media**:
  a. In the navigation tree, select **Volumes**. The **Volumes** detail table appears.
  b. Right-click a volume in the **Volumes** detail table, and select **Recycle**. The **Recycle** window appears. It names the selected volume.
  c. Select the recycle policy: **Auto** (default) or **Manual**.
  d. Click **OK**.
- From the command prompt, type the following:

  ```
  nsrmm -o recyclable volume
  ```

Compatibility problems and limitations descriptions

Removable Storage Manager not supported

LGTsc19401

The NetWorker software does not support the Removable Storage Manager (RSM). You cannot use the NetWorker software to allocate one or more volumes in an RSM library.

The Homebase Agent is not supported in a Cluster environment

LGTsc20557

For NetWorker release 7.5, the Homebase Agent is not supported in a Cluster environment.

Support for Windows Change Journal Manager with Microsoft Windows 2008

LGTsc14700

When VSS is used, the Microsoft Change Journal is not used. Microsoft Windows 2008 is VSS only, so Windows 2008 does not use the Windows Change Journal.

Configuration problems and limitations descriptions

Cannot set nsrdir parameter for virtual server using remote Microsoft Management Console

LGTsc18397

When configuring a virtual NetWorker server on Windows Server 2008 Core using a remote Microsoft Management Console (MMC), the **nsrdir** parameter for the NetWorker server service cannot be set because the service's Properties tab is not visible.

Workaround

It is necessary to register the NetWorker server resource type on the remote machine running MMC in order to view the service's Properties tab to change the settings. To register the resource type:

1. Install the NetWorker server software.
2. Run **regcnsrd -r** on the remote machine. You can now use a remote MMC to set the parameters.

Note: Besides MMC, you can also use the CLI cluster command on the cluster to set the **nsrdir** value. For example: **cluster res networker /priv: NsrDir="I:\nsr"**

Running the Linux 64-bit package with the 2.6.x kernel may result in crashes

LGTsc06585

A compatibility issue with libc and pthreads libraries on Linux 2.6 kernel-based environments causes problems when running the 64-bit package for Linux on platforms built on the 2.6.x kernel (for example, RedHat AS 4 and SuSE SLES 9). Although operation may be normal at first, continued use of the 64-bit package with a 2.6.x kernel may result in crashes of various programs.

Use the 32-bit package when running with a 2.6.x kernel. Running a 32-bit package instead of the 64-bit package should have no operational impact. The 64-bit package can still be used for kernel version 2.4 Linux variants such as RedHat AS 3 and SuSE SLES 8.

Devices and Media problems and limitations descriptions

For Microsoft Windows Server 2008 raw devices are not saved under the virtual client's index

LGTsc19241

When performing a savegroup of save set "All" for the virtual client, raw device are excluded from the backup list, even when directives are used. When a backup of the raw device is performed from the command line, the raw device is saved under the physical host's index, rather than the virtual client's.

Workaround

To fix the problem and back up the raw devices under the physical node's index:

1. Edit the client resource for the virtual client:
   a. Update the save set list to include the raw device, for example:

      ```
      \\.\M:
      ```

   b. For the Backup Command attribute, set the following value to force the save sets go to the correct index:

      save -c *virtual_client_name*

   c. Create a directive using **rawasm**, for example:

      ```
      rawasm:  \\.\M:
      ```

2. On all nodes in the cluster, create the pathownerignore file. Ensure that the pathownerignore file is created in the NetWorker installation directory, for example:

   ```
   c:\Program Files\EMC NetWorker\nsr\bin
   ```

Broker connects to first available storage node if no device or mmd available on first host

LGTsc19676

If there is no device or mmd available on the first host in the affinity list, the broker continues through the affinity list until the first available storage node is located. Since the broker is not designed for file and AFTD devices, it does not recognize that the volume and the device are inseparable (for example, the broker could request an AFTD volume to be mounted on a different host). This is only a problem with stand-alone devices, because volumes are not associated with storage nodes.

Workaround

To work around the problem, assign different devices to different pools. If the volume is not in a jukebox, the server has no way of knowing which volume can be mounted on which storage node.

Cannot create an advanced file-type device on a remote storage node device

LGTsc11158

If the **nsrmmd** daemon has not started on the storage node, creation of an advanced file-type device (AFTD) on the storage node will fail because the **nsrmmd** daemon cannot validate the AFTD path.

Workaround

If this issue is encountered, either:

- Select **No** to the **Verify path** prompt when the AFTD is being created, then manually label the device.
- Attempt to create the AFTD again.

VMware Consolidated Backup 1.0.x is not supported on Windows Server 2003, Enterprise Edition (x64) Service Pack 2

LGTsc10950

VMware Consolidated Backup 1.0.x is not supported on Windows Server 2003, Enterprise Edition (x64) Service Pack 2.

NetWorker becomes unresponsive when attempting an invalid clone operation

LGTsc06358

You cannot put multiple instances of the same clone onto a single volume. NetWorker should prevent the operation and provide an error message. Instead, if this operation is attempted, NetWorker becomes unresponsive.

Workaround

Ensure that multiple instances of a clone are placed on different volumes.

Cannot query UNIX non-ASCII save sets in NMC

LGTsc01923

Because of differences between the encoding used to create non-ASCII save sets on UNIX platforms and the encoding used by NMC to query the media database, using the Query Save Set window to query for non-ASCII save sets that were created on UNIX platforms will result in no matches being found.

Virtual tapes are listed as full after mounting

LGTpa93001

In a Windows environment when using virtual IBM tape drives, virtual tapes are listed as "full" even though 0 KB have been written to the tape. This can be observed after labelling and mounting the tape.

Workaround

Change the system configuration to use an equivalent tape drive from a manufacturer other than IBM. For example, type HP LTO-3, instead of IBM LTO-3.

Scan for Devices configures all devices as a regular storage node device

LGTpa88188

When adding a new device to a jukebox, the scan operation detects a device, but incorrectly displays it as a storage node device. Attempting to configure the device as standalone device fails with the following error message:

```
cannot create the device, storage node enabler is required
```

Workaround

1. Using the Console, create a new device. For example:

   rd=*Storage_Node*:/dev/rmt/...

2. Specify the device is a Dedicated Storage Node by using the **Configuration** tab.
3. Use **jbedit** command to add a new drive to this device. The **jbedit** man page contains more information regarding the use of the **jbedit** command.

The Virtual Jukebox attribute for a CDL Virtual Tape Library is not automatically set after upgrading

LGTsc01446

If the **jbconfig** command was used to configure a CDL VTL in the 7.3.2 release, the Virtual Jukebox attribute is not automatically set after upgrading to the current release.

Workaround

After upgrading to the current release, initiate a Scan for Devices operation using the NetWorker Console to scan only the NetWorker storage node on which the VTL is configured. The NetWorker software will update all VTL related attributes utilizing the new VTL license.

This behavior does not occur when using the auto-configuration option.

Inventory operation in Software Administration wizard delays for unreachable clients

LGTsc06280

When starting an inventory operation using the Software Administration wizard, there is a delay of 7 to 8 minutes for each client configured on the server that is unreachable (for example, if a NSR Installed Software resource entry does not exist) and has not previously been inventoried. Once started, you cannot cancel the inventory operation and must wait until the **Select Clients for Inventory** window displays to continue the operation.

Workaround

Ensure there are no unreachable clients on the server. Also, if you want to perform an inventory operation but do not need to inventory specific clients, inventory all clients using the **nsrpush** command with the **-all** option; for example, **nsrpush –i –all**.

GUI problems and limitations descriptions

Deduplication recover sessions do not appear in NMC

LGTsc10295

Deduplication recover sessions do not appear in the Monitoring window of NMC. However, deduplication save sessions appear.

To view the Monitoring window:

1. From the **Administration** window, click **Monitoring**.
2. Click **Session**.

Text searched for in the NetWorker Console Help program does not get highlighted correctly if using JRE 1.5.x for Asian languages

LGTsc08756

Due to a known limitation with JRE 1.5.x (Sun bug 6375606), when performing a search for text in the NetWorker Console Help program, the search is completed but the keyword is not highlighted correctly. Update the JRE version to 1.6 or later.

On HP-UX the NetWorker Server window does not appear

LGTsc00365

On HP-UX, the following error message appears if in NMC the **Setup** › **Setup System Options** attribute is selected and the NetWorker server window does not appear:

```
"Unable to connect to server: Failed to contact using UDP ping."
```

Workaround

1. Open the NMC window and select **Setup** › **Setup System Options**.
2. Ensure that **RPC ping using UDP when connecting to NetWorker** is cleared.

Cannot copy and paste Japanese characters by using NMC

LGTsc01115

On UNIX platforms, cannot copy and paste Japanese characters with **Ctrl+C** and **Ctrl+V** using NMC.

Newly created groups are not displayed by the NetWorker Console after moving system date back in time

LGTpa95162

If the system date is moved to a past date and subsequently moved back to the current date, newly created groups are not displayed in the NetWorker Console.

Workaround

Select the Archive Request tab from within the Monitoring task window and the Groups table will refresh.

Cannot launch NetWorker Console Help program on Solaris 10 with a JRE earlier than version 1.5.0_09

LGTpa96168

The NetWorker Console Help program will not launch if the JRE version is earlier than 1.5.0_09.

NetWorker release 7.6 and later requires JRE version 1.6 or later.

NMC version 3.4 and NWD version 1.0 cannot be installed on the same host

LGTsc05879

If NetWorker Dashboard (NWD) 1.0 is installed on the NMC Server 3.4 host, NMC fails to download, and a Java Web Start error appears. NMC 3.4 and NWD 1.0 cannot function together due to database security and Java certificate issues, and the NMC GUI will not launch if NWD is installed on the same host as the NMC Server.

Workaround

Uninstall NWD before updating to NMC 3.4 for NetWorker release 7.4.

Installation problems and limitations descriptions

For Microsoft Windows, ensure that the HomeBase Agent software is installed in the same installation path as the NetWorker software

LGTsc16831

For Microsoft Windows, ensure that the HomeBase Agent software is installed in the same installation path as the NetWorker software.

It is not recommended to manually install the HomeBase Agent software into a location that was not specified during the NetWorker software installation process.

On Microsoft Windows, the HomeBase Agent installation path is at the same level as the default or user-defined installation directory.

For example:

```
C:\Program Files\EMC NetWorker\nsr
C:\Program Files\EMC NetWorker\HomeBaseAgent
```

Example

For example, if the NetWorker software is installed under:

- *C:\Program Files\EMC NetWorker* which is the default location for the NetWorker software, then the HomeBase Agent software is installed under the following location: *C:\Program Files\EMC NetWorker\HomebaseAgent*
- *C:\EMC NetWorker* which is an example of a non-default installation location for the NetWorker software, then the HomeBase Agent software is installed under the following location: *C:\EMC NetWorker\HomebaseAgent*

Before restoring the base profile, manually edit the fields in the recovery-configuration.xml file

LGTsc18641

If the HomeBase Agent is installed with the NetWorker client package, the base profile for the HomeBase Agent might not be updated.

Before you restore the base profile, you must first update the *recovery-configuration.xml* file or the recovery operation might fail.

Workaround

To work around this issue, manually edit the fields in the following file before performing a recovery of the base profile:

```
install_dir/etc/config/recovery/custom/recovery-configuration.xml
```

Note: Where *install_dir* is the location of the Homebase Agent installation directory.

Unable to launch the NetWorker Dashboard software with NetWorker installed

LGTsc18925

If the NetWorker Dashboard software is installed on a computer with the NetWorker software already installed, the NetWorker Dashboard software will not start.

The following errors might occur:

- At the end of the NWD server installation process, a warning message might appear stating that the NWD server could not start.
- After starting the NWD Server process, either manually through Microsoft Windows Services or automatically on system start up, the NWD server process might stop shortly afterwards.
- When launching the NWD GUI, a message might appear stating that the NWD server process is not running.

Workaround

To work around this issue:

1. Open and edit the serverproperties.xml file. The file is located in:

   NWD_Install_Di\classes\serverproperties.xml

   Note: Where *NWD_Install_Dir* is the installation directory where the NWD server software was installed.

2. Locate the text specifying the **dbport** value. For example:

   ```
   <param name="dbport">2638;DoBroadcast=NONE;HOST=myhost</param>
   ```

3. Edit the text string so that it contains only the port information. For example:

   ```
   <param name="dbport">2638</param>
   ```

4. Save the serverproperties.xml file.

5. Restart the NWD server process.

Upgrading on Linux with rpm -Uvh not working correctly (fixed in NetWorker 8.0 SP2)

LGTsc15490

When upgrading on Linux systems using the **rpm -Uvh** *package_name* command, the NetWorker startup script, /etc/init.d/networker, is not installed.

Workaround

To upgrade on Linux systems, use the following steps:

1. Uninstall NetWorker packages using **rpm -e**.
2. Install the new versions of NetWorker packages using **rpm -ivh**.

Licensing problems and limitations descriptions

This section details the problems and limitations related to licensing.

NetWorker and the HomeBase Agent (BMR) licenses work independently

LGTsc19388

The software licenses for the NetWorker software and the HomeBase Agent (Bare Metal Recovery) software work independently.

Example 1

If the Bare Metal Recovery (BMR) license is *disabled* and the base enabler license for the NetWorker server where the client is configured is *enabled*, the following occurs when a savegroup is run:

- The BMR profiling fails
- The NetWorker backup succeeds

Example 2

If the Bare Metal Recovery (BMR) license is *enabled* and the base enabler license for the NetWorker server where the client is configured is *disabled*, the following occurs when a savegroup is run:

- The BMR profiling succeeds
- The NetWorker backup fails

Localization problems and limitations descriptions

For more information on localization important notes and tips, see "Internationalization support" on page 199.

The NMC Japanese Online Help displays incorrect characters on Linux systems

LGTsc02862

The NMC Japanese Online Help displays incorrect characters on Linux systems due to limitations with the Javahelp software. These limitations affect the software's ability to display fonts in the help viewer content pane.

Due to this limitation in Javahelp the only character encoding that appears is the system default; not the font defined by the user.

The nwrecover program will not start on Linux platforms for Asian Languages if the necessary fonts are not installed

LGTsc02808

The **nwrecover** program will not start on Linux platforms for Asian Languages if the necessary fonts are not installed.

Workaround

Install the following font packages:

- ttf-founder-simplified-0.20040419-6.1.noarch.rpm
- ttf-founder-traditional-0.20040419-6.1.noarch.rpm

Non-ASCII save set names are displayed incorrectly in nsradmin visual mode on Linux

LGTpa92833

Non-ASCII save set names are displayed incorrectly in **nsradmin** visual mode on Linux.

Workaround

To work around this limitation, do one of the following:

- Use the **print nsr client** command in **nsradmin** window to view the non-ASCII save set.
- Use the Console GUI on the Linux client to view the non-ASCII save set.

Messaging problems and limitations descriptions

nsrbmr does not give proper error messages under certain conditions

LGTsc16423

An appropriate error message is not displayed when both BMR profiling status and **savegrp** status fail due to one of the following:

- The Homebase Agent is uninstalled and a savegrp with BMR-enabled client is performed.
- A communication issue occurs between **nwserv** and **nwclnt**.

An error message appears but BMR profiling still completes with a status of "pass" in the following scenarios:

- The Homebase Agent services are stopped during or after profiling. In this case, **nsrbmr** completes without any errors.
- Incorrect options are specified in the BMR options field under client properties. A command usage error appears, but profiling status indicates “pass”.
- After installation, when the first **savegrp** is performed with BMR-enabled client, the HomeBase server name is specified in the server properties and the BMR options field is left blank.

Once the **savegrp** is completed for the BMR-enabled client, it is recommended to check the status of the BMR profile completion to ensure that BMR profiling has completed successfully.

Error message does not display for annotations with similar characters at the end

LGTsc17737

Nsrretrieve does not display an error message when a retrieve is performed using regular expressions for two annotations with similar characters at the end.

Erroneous error message may be generated by Linux operating systems when performing an I/O to a volume

LGTsc08054

The following erroneous error message may be generated by Linux operating systems when performing an I/O to a volume:

```
kernel: program nsrmmd is using deprecated SCSI ioctl, please convert
it to SG_IO.
```

Ignore this message. In upcoming NetWorker releases, this warning from the kernel will stop.

New pdksh package required on SuSE 10 x86

LGTsc08978

A failed dependencies error occurs on the SuSE 10 x86 platform if the required version of the pdksh package is not installed. The following is displayed:

```
error: Failed dependencies: /bin/ksh is needed by lgtoclnt-7.4-1
```

Workaround

Install **pdksh-5.2.14-801.i586.rpm**, which can be downloaded from the SuSE/Novell website.

You could alternatively install the packages with the **--nodeps** option.

Incorrect error message reported when starting the NetWorker console on Red Hat 64-bit Enterprise Server 4

LGTsc03478

On a Red Hat 64-bit Enterprise Server 4, the preinstalled Mozilla browser incorrectly reports that the JRE is not installed. The NetWorker console uses Javascript to detect the JRE installation and a warning message appears reporting that the correct JRE is not installed on the client machine.

If the correct JRE is already installed, ignore the message. To start the NetWorker Console, click the Start link in the line "If you have installed JRE 1.6 or later, then click here to start NetWorker Management Console" from the Mozilla browser.

Error states you need to perform an uninstall when updating from NetWorker 7.2.2 32-bit to NetWorker 7.5 64-bit

LGTsc06288

When updating from NetWorker release 7.2.2 32-bit on x64 to NetWorker 7.5 64-bit, an error message is displayed stating that the 32-bit NetWorker software is already installed and should be uninstalled.

Workaround

It is not necessary to do a complete uninstall of NetWorker release 7.2.2 to perform this update. Perform a partial uninstall of NetWorker release 7.2.2 32-bit, then install NetWorker release 7.5 64-bit to the same location that the 7.2.2 32-bit version was installed.

Note: The 32-bit version of NetWorker release 7.3.x is the only version of 32-bit NetWorker software that is supported on ntx64. NetWorker release 7.4 and later does not allow 32-bit NetWorker to be installed on ntx64.

NetWorker support for Novell's OES Linux limitations

Limitations to support for Novell's OES Linux with NetWorker are as follows:

- "Metadata modifier field not recovered" on page 168
- "Creating eDirectory backup files for NetWorker backup and recovery" on page 169
- "Creating GroupWise backup files for NetWorker backup and recovery" on page 169

IMPORTANT

NSS+eDirectory backups and GroupWise backups are two unrelated procedures and should be considered separately.

Metadata modifier field not recovered

When you perform backup and recovery by using the NetWorker software, it does not recover the metadata modifier field for NSS files or directories.

Creating eDirectory backup files for NetWorker backup and recovery

eDirectory is a database of Network resources that contains extra information related to NSS objects. However, since eDirectory is not part of the file system, when you perform backup and recovery using the NetWorker software, NetWorker does not recover eDirectory data as it was backed up.

Workaround

NetWorker can perform a parallel backup and recover of eDirectory files using eMBox/DSBK (eMBox is a GUI version of DSBK). DSBK is a command line tool used to back up eDirectory as a complete database, saving all the information on a file that is created when running the pre-and-post script. The file created by DSBK is saved by NetWorker along with the backup of the file system.

The following is an example of how to create a pre-and-post script to backup and recover eDirectory.

Note: If performing a manual (non-scheduled) backup, DSBK should always be run before the NSS file system backup. If performing a scheduled backup, initiate DSBK by a pre-command script using savepnpc, and ensure that the savegrp includes the exported database on the file system. DSBK should always create the eDirectory backup file before save runs, so NetWorker can back up both the file system and the DSBK file. If performing a recovery, the same order applies. Recover eDirectory using DSBK, and then recover the NSS file system.

To back up and recover eDirectory by using DSBK:

1. In the /etc/dsbk.conf file, set the following value:

   /root/dsbk.command

   The output for the command is written to eDirectory's log file.

2. Run the following command:

   dsbk backup -f /media/nss/NSS1/ndsbk -l /media/nss/NSS1/nds.log

   Two files are created; ndsbk and nds.log. The ndsbk file contains eDirectory information that can be backed up using the NetWorker software. The nds.log file contains messages for the successful creation or errors.

3. Using the NetWorker software, recover the ndsbk file.

   Once the file has been recovered, you can recover eDirectory.

4. To recover eDirectory, run the following command:

   ```
   dsbk restore -f /media/nss/NSS1/ndsbk -l /media/nss/NSS1/nds.log -r
   -a -o
   ```

Creating GroupWise backup files for NetWorker backup and recovery

When you perform backup and recovery using the NetWorker software, you need to create a pre-and-post script to backup GroupWise so that NetWorker can recover GroupWise data as it was backed up.

The following is an example of how to create a pre-and-post script to backup GroupWise:

1. Create a backup directory (for example, backup).

2. Run this command to copy the Post office (-p) to the backup directory:

   ./dbcopy –m –p –v /gw /backup

3. Run this command to copy the Domain (-d) to the backup directory:

   ./dbcopy –m –d -v /gw /backup

   You can now use the NetWorker software to back up the backup directory.

4. Run the following command to stop GroupWise:

   ./rcgrpwise stop

5. Remove GroupWise and the backup directory.

6. Run the following command to start GroupWise:

   ./rcgrpwise start

The following is an example of how to create pre-and-post script to recover GroupWise:

1. Use NetWorker to recover the backup directory.

2. Run the following command to stop GroupWise:

   ./rcgrpwise stop

3. Run the following command to copy the Domain (-d) from the backup directory to the GroupWise directory:

   ./dbcopy –m –d –v /backup /gw

4. Run the following command to copy the Post office (-p) from the backup directory to the GroupWise directory:

   ./dbcopy –m –p –v /backup /gw

5. Run the following command to start GroupWise:

   ./rcgrpwise start

6. Run the following command to view the status of GroupWise and confirm that the recovery was successful:

   ./rcgrpwise status

NetWorker Management Console problems and limitations descriptions

NetWorker Management Console may become unresponsive when opened using Exceed

LGTsc02903

When using Exceed to launch the NetWorker Management Console from a UNIX or Linux system, NMC may become unresponsive.

Workaround

Enable the **XTEST (X11R6)** variable in the Exceed XConfig program on the Windows host.

Restore problems and limitations descriptions

Last-modified date changed for files recovered to Sun Cluster global file system

LGTsc19364

The last-modified date for files recovered to the SUN Cluster global file system may be displayed as the current time instead of the last date the files were changed, due to an issue with Sun Cluster version 3.2.

Workaround

Disable **pxfs_fastwrite** by performing the following:

1. On all cluster nodes, run:

   ```
   # echo "pxfs_fastwrite_enabled/W 0" |mdb -kw
   ```

2. Unmount, then mount the global file systems for the change to appear.

To re-enable fastwrite:

1. Set the variable **pxfs_fastwrite_enabled** to 1.
2. Unmount, then mount the global file systems.

More information on this issue is provided at the following website:
http://bugs.opensolaris.org/bugdatabase/view_bug.do?bug_id=6540206

Do not recover identical save sets with different ssids to the same target directory

LGTsc10796

Do not perform a save set recovery from the command prompt, with multiple save set IDs that all point to the same file/directory path and will be recovered into the original location.

Data corruption might occur when the same dir/file path is backed up multiple times. This creates multiple save sets, each with a different save set ID. For example, ssid1 and ssid2 are save set IDs created for the same file/directory path, at different save or backup times.

When the recover command or the **nsrretrieve** command is run to retrieve more than one instance of the save set, each with a different save set ID, into the original location, the recovered instance of the directory/file from *ssid1* might be overwritten by the recovered data of the same directory/file from *ssid2*.

Example

Data corruption might occur in the following scenario:

```
recover -s server -c client -S ssid1 -S ssid2
nsrretrieve -s server -S ssid1 -S ssid2
```

where *ssid1* and *ssid2*, are save set IDs of the same file/directory.

NetWorker interactive recover does not recover the registry and the com+ regdb writers

LGTsc14577

You cannot perform a system recover of the registry and com+ regdb writers by using the interactive mode of the **recover** command.

Workaround

Perform a system recovery using the noninteractive mode of the **recover** command, or use the NetWorker User program.

Restoring full VM image on ESX server fails

LGTsc11618

When attempting to restore a full VM image directly onto the ESX server, the recovery fails.

Workaround

Recover to the proxy host and use VirtualCenter tools (VMware Converter).

Unable to restore files encrypted with both Microsoft Windows Encrypting File System & AES encryption

LGTsc11734

When AES encryption is applied to a file that is also encrypted using the Microsoft Windows Encrypting File System (EFS), the backup will be reported as successful. However, recovery of the file fails and the following message is written to the NetWorker log file:

```
recover: Error recovering <filename>. The RPC call completed before
all pipes were processed.
```

Workaround

Do not use AES encryption when backing up files that are encrypted by using EFS.

The nwrecover program might fail to launch on a Solaris Sparc V240 server

LGTsc06577

The **nwrecover** program might fail to launch on a Solaris Sparc V240 server if the following CDE/Motif patch is not installed:

Solaris 10 CDE 1.6 Runtime update:
sparc: 119280
x86: 119281

FSRM Disk Quota may not be restored to previous settings after recovery

LGTsc05990

The NetWorker software might not restore the previous FSRM Disk Quota configuration after the Disk Quota recovery. Some of the changes made to the setup values after saving the FSRM Disk Quota may remain after the recovery operation. However, if the Disk Quota is completely deleted, it can be restored to the previous configuration.

After a BMR recovery operation the root password might change

LGTsc20558

After BMR recovery (base profile) operation, the root password might change. For example:

- On UNIX, the root password might be reset to **risckey**.
- On Microsoft Windows a new admin username and password is created. You can log in as administrator with the profiled servers password or as the indigostone user. For example:
  - Admin username: indigostone
  - Admin username password: H0meBase

On NetApps files, filenames ending with special characters might be renamed

LGTpa95900

On NetApps filers, the recovery of filenames ending with the special character sequence *~n* (where *n* is a number) might be renamed with *~1* appended at the end of the name. For example, a file named *C~1* might be restored with the name *C~1~1*.

This behavior might occur when the **DIRECT=Y** application parameter has been defined in the NetApps client instance.

Workaround

To perform a file level recovery of a file with a special character sequence, perform one of the following:

- Set the following environment variable prior to performing a file level recovery:

  NSR_NDMP_RECOVER_NO_DAR=y

- Redefine the NetApps client application parameters:

  `DIRECT=Y.`

Note: This will not address the recovery of legacy backups performed prior to the **DIRECT=Y** parameter removal. In this case, you must set the **NSR_NDMP_RECOVER_NO_DAR=y** environment variable before performing the recovery operation.

The winworkr program fails to retrieve successfully archived files if a slash (\) character was entered in the annotation string

LGTpa94966

The **winworkr** program fails to retrieve successfully archived files if a slash (\) character was entered in the annotation string.

Workaround

Enter a double slash (\\) into the annotation string and the files will be archived and retrieve operations perform successfully.

Directed recover fails with permission errors on Windows

LGTpa83927

A directed recover operation fails when using the command line interface (CLI) and the **winworkr** program. Permission errors display if the NetWorker server and the client where the files are to be recovered to are running Windows.

Workaround

To perform a directed recover, one of the two following conditions must be met:

- If the NetWorker server and target recover client are in the same domain, start the NetWorker server (**nsrd**) as a domain user that is in the Windows Administrators group on the NetWorker server machine.
- If neither machine is in a domain, or they are not in the same domain:
  - Ensure that the user:
    - Exists on both machines.
    - Has the same password on both machines.
    - Is in the Windows Administrators group on the NetWorker server machine.
  - Start the NetWorker server (**nsrd**) as the local user existing on both systems with the same password.

The winworkr program will not relocate to a partition not existing on the initiating host if the NetWorker server is running release 7.4 and the client is running release 7.2

LGTsc00167

If the NetWorker server is running release 7.4, and the 7.2 release is installed on a client, a directed recover will not relocate to a partition that does not exist on the host initiating the recover operation. An error message is displayed indicating that it is an invalid directory.

Workaround

Upgrade the client to release 7.4 or create the appropriate directory on the host initiating the recovery.

Performing a save set query can take a long time if the query parameter in the Query Save Set tab is set to "Save Time" and From and To calendars for 3 or more days

LGTsc05053

In a large scale NetWorker environment, performing a save set query can take a long time if the query parameter in the Query Save Set tab is set to **Save Time** and **3 or more days** in the From and To calendar.

An Operation in Progress window appears with the following message:

```
Getting save set information from NetWorker server <sever name>
```

This dialog box will remain till the save set query is complete blocking you from performing any other operations on the NetWorker server.

Workaround

Perform the save set query using the **mminfo** command from the command line.

For recoveries operations using Celerra filers, misleading error messages might display

LGTpa96554

On Celerra filers, the recovery of a backup containing a recursive directory can result in the generation of log messages:

```
NDMP Service Debug: Too much retry on header research
```

This log message can be intermittent in nature as subsequent recoveries of the same back might not result in the generation of a log message.

This log message does not affect the recovery and can be ignored.

Upgrading problems and limitations descriptions

JRE version mismatch causes authentication failure, stops GSTD

LGTsc08958

After updating the NetWorker release, if the JRE version installed on the system is lower than the JRE version required by NetWorker, NMC cannot be launched and the GSTD process stops with an "authentication failure" error message.

Workaround

Update to JRE version 1.6 or later.

When upgrading from release 7.3.1 the Virtual Jukeboxes attribute will not be set correctly

LGTpa95019

When upgrading from the 7.3.1 release, the Virtual Jukeboxes attribute will not be set if you previously configured a Virtual Tape Library (VTL) using the 7.3.1 release. After upgrading to 7.5, the Virtual Jukeboxes attribute uses the normal jukebox license instead of a VTL license. The VTL still functions normally using the normal jukebox license. The Virtual Jukeboxes attribute will function normally if upgrading to the 7.5 release from 7.3.2.

Group details window is empty after upgrading from NetWorker release 7.2.2

LGTsc01587

After upgrading to NetWorker release 7.4 from release 7.2.2, savegroups details run prior to the upgrade do not appear in the Group Details window.

NetWorker releases previous to 7.4

Table on page 177 identifies problem issues and limitations discovered in NetWorker release prior to 7.4 that continue to be applicable. The known limitations are separated into the following categories:

- "Backup operations problems and limitations descriptions" on page 180
- "CLI problems and limitations descriptions" on page 184
- "Cloning problems and limitations descriptions" on page 185
- "Compatibility problems and limitations descriptions" on page 185
- "Configuration problems and limitations descriptions" on page 185
- "Devices and media problems and limitations descriptions" on page 187
- "GUI problems and limitations descriptions" on page 192
- "Installation problems and limitations descriptions" on page 194
- "Licensing problems and limitations descriptions" on page 195
- "Localization problems and limitations descriptions" on page 195
- "Messaging problems and limitations descriptions" on page 196
- "NDMP problems and limitations descriptions" on page 196
- "Restore problems and limitations descriptions" on page 197

Table 19 Limitations discovered in NetWorker releases previous to 7.4 (page 1 of 4)

Issue number	Description of limitation	Operating system affected	Product feature
"LGTpa83221" on page 181	Backup might default to an incorrect server If the **-s** option is not specified with the **save** command.	All	Backup
"LGTpa82436" on page 182	VSS on Windows Server 2003 x64 requires a Microsoft hotfix if Windows is running MSSQL Server or MSDE.	Windows	Backup
"LGTpa75719" on page 181	Save set status is displayed as invalid if a DSA backup is terminated due to an invalid backup path.	AIX, Solaris, HP-UX, Tru64 UNIX, Linux	Backup
"LGTpa75339" on page 182	Backup will fail with remote exec service if passwords are not configured correctly.	Windows	Backup
"LGTpa73509" on page 181	The /system/object and /system/contract directories are not skipped during a backup on Solaris 10.	AIX, Solaris, HP-UX, Tru64 UNIX	Backup
"LGTpa51184" on page 182	Increase server parallelism to complete concurrent operations.	AIX, Solaris, HP-UX, Tru64 UNIX, Linux	Backup
"LGTpa61694" on page 182	SHAREPOINT save set cannot be excluded with directives when a save set of ALL is specified.	Windows	Backup
"LGTpa58888" on page 183	Command-Line Backup and Recovery of SYSTEM Save Sets.	Windows	Backup
"LGTpa58422" on page 184	VSS backups of raw devices unsupported.	Windows	Backup
"LGTpa41039" on page 180	Windows management instrumentation database might stop responding.	Windows	Backup
"LGTpa54620" on page 180	Microsoft VSS backups on a FAT32 partition take longer than on an NTFS partition.	Windows	Backup
"LGTpa83221" on page 181	Backup might default to an incorrect server If the -s option is not specified with the save command.	All	Backup
"LGTpa79664" on page 181	The /var/log/lastlog file causes a save process to appear to hang on RedHat AS4 x86_64.	Linux, Solaris	Backup
"LGTpa75719" on page 181	Save set status is displayed as invalid if a DSA backup is terminated due to an invalid backup path.	AIX, Linux, HP-UX, Solaris, Tru64 UNIX,	Backup
"LGTpa73509" on page 181	The /system/object and /system/contract directories are not skipped during a backup on Solaris 10.	Linux, Solaris	Backup
"LGTpa51184" on page 182	Increase server parallelism to complete concurrent operations.	AIX, Linux, HP-UX, Solaris, Tru64 UNIX,	Backup
"LGTpa75339" on page 182	Backup will fail with remote exec service if passwords are not configured correctly.	Windows	Backup
"LGTpa61694" on page 182	SHAREPOINT save set cannot be excluded with directives when a save set of ALL is specified.	Windows	Backup
"LGTpa58888" on page 183	Command line backup and recovery of SYSTEM save sets.	Windows	Backup
"LGTpa58422" on page 184	VSS backups of raw devices unsupported.	Windows	Backup

Table 19 Limitations discovered in NetWorker releases previous to 7.4 (page 2 of 4)

Issue number	Description of limitation	Operating system affected	Product feature
"LGTpa87308" on page 184	Using the withdraw command to withdraw a volume on a partitioned library fails.	All	CLI
"LGTpa91406" on page 184	The **ls -l** command does not display files recovered from a NetApp Data ONTAP 6.5 file system.	AIX, Solaris, HP-UX, Tru64 UNIX, Linux	CLI
"LGTpa76457" on page 184	The **mminfo** command does not display a weekly summary of save set usage during the change to daylight savings time.	All	CLI
"LGTpa51045" on page 184	Perform a save set recovery when using the save command with the -I input_file option.	AIX, Solaris, HP-UX, Tru64 UNIX, Linux	CLI
"LGTpa62490" on page 185	Cloning on an EMC DART CFS 5.2 is unsupported.	All	Cloning and Staging
"LGTpa70320" on page 185	Automatic cloning might fail when using a single staging policy.	All	Cloning and Staging
"LGTpa41044" on page 185	NetWorker software might stop responding when running SQL server 2000 and NetWorker client.	Windows	Compatibility
"LGTpa89947" on page 185	Cannot deposit volumes in a DAS silo.	All	Configuration
"LGTpa57709" on page 186	Removable storage manager jukebox configures all devices automatically.	Windows	Configuration
"LGTpa35407" on page 186	Change journal manager problems with multiple servers.	Windows	Configuration
"LGTpa83273" on page 187	Misleading error message reported if an invalid NDMP storage node password is entered when labelling a volume.	All	Devices and Media
"LGTpa83579" on page 187	Device operations using the right click option might be lost.	AIX, Solaris, HP-UX, Tru64 UNIX, Linux	Devices and Media
"LGTpa82503" on page 187	Media capacity notification not logged in the media database.	AIX, Solaris, Windows, HP-UX, Tru64 UNIX, Linux	Devices and Media
"LGTpa80901" on page 187	labelling volumes concurrently might fail when using the NetWorker Console.	AIX, Solaris, HP-UX, Tru64 UNIX, Linux	Devices and Media
"LGTpa87657" on page 188	The **udev** tool is unsupported on Emulex running Linux RedHat AS 4 using default kernel 2.6.	Linux	Devices and Media
"LGTpa74492" on page 188	The **jbconfig** command might fail on Windows 2003 with a multidrive jukebox.	Windows	Devices and Media
"LGTpa68867" on page 188	Tape gets stuck in a drive when labelling Linux Red Hat.	Linux	Devices and Media
"LGTpa54632" on page 189	Error message appears in daemon log when labelling a volume that contains PowerSnap save sets.	AIX, Solaris, HP-UX, Tru64 UNIX, Linux	Devices and Media
"LGTpa55128" on page 189	Slow Solaris tape operations when using an IBMtape driver with IBM LTO-2 Tape drives and the NetWorker CDI.	AIX, Solaris, HP-UX, Tru64 UNIX	Devices and Media
"LGTpa51725" on page 189	NetWorker software attempts to eject a stuck tape.	AIX, Solaris, HP-UX, Tru64 UNIX, Linux	Devices and Media

Table 19 Limitations discovered in NetWorker releases previous to 7.4 (page 3 of 4)

Issue number	Description of limitation	Operating system affected	Product feature
"LGTpa66565" on page 189	Volume retention information does not apply to volumes that contain snapsets.	All	Devices and Media
"LGTpa50485" on page 190	Increase the value of the save mount timeout attribute when auto media management is enabled and a corrupt tape is encountered.	All	Devices and Media
"LGTpa45470" on page 190	Volume remains in the tape drive if the storage node nsrmmd is not responding in a shared drive environment with DDS.	All	Devices and Media
"LGTpa37996" on page 191	The nsrjb -L and -I operations fail with an Exabyte Mammoth-2 tape drive with Fibre Channel device.	AIX, Solaris, HP-UX, Tru64 UNIX, Linux	Devices and Media
"LGTpa58356" on page 190	Label tape operation fails on an HP-UX platform if CDI is turned on and IBM tape driver is used.	All	Devices and Media
"LGTpa58215" on page 191	Jukebox fails to allocate enough devices.	Windows	Devices and Media
"LGTpa50089" on page 191	Entering the inquire command during tape activity causes a device error.	Windows	Devices and Media
"LGTpa36367" on page 191	Tape Drive Requires Cleaning Error Message.	Windows	Devices and Media
"LGTpa89859" on page 192	Unable to configure an ACSLS silo on Windows with lib_attach 1.4.1.	Windows	Devices and Media
"LGTpa87730" on page 192	Cannot launch the NetWorker Console from a Linux PowerPC client.	Linux	GUI
"LGTpa77990" on page 192	Cannot run commands in **nsradmin** without the **nsrexecd** daemon.	Windows	GUI
"LGTpa82555" on page 193	Remote client save sets with japanese characters are displayed incorrectly.	Windows	GUI
"LGTpa83820" on page 193	Files backed up from a VSS system fileset appear in the file system tree.	Windows	GUI
"LGTpa53364" on page 193	SCSI device ID displayed differently than NetWorker NDMP devices.	AIX, Solaris, HP-UX, Tru64 UNIX, Linux	GUI
"LGTpa56231" on page 193	All client file index entries might appear not to have been deleted.	All	GUI
"LGTpa86214" on page 194	Microsoft Windows username cannot contain a '!' character.	Windows	GUI
"LGTpa80764" on page 194	No alternative location provided for the java14.sdk.tar file if the /tmp directory is full.	AIX, Solaris, HP-UX, Tru64 UNIX, Linux	Installation
"LGTpa83706" on page 194	ASR and non-ASR recovery fails if the Windows install CD does not match the service pack level of the data being backed up.	Windows	Installation
"LGTpa50807" on page 194	Error downgrading to business edition.	All	Installation
"LGTpa62224" on page 195	NetWorker License Manager allowance limitation.	Windows	Licensing
"LGTpa79450" on page 205	The XAPPLRESDIR environment variable must be set to operate the NetWorker Console on HP-UX.	HP-UX	Localization

Table 19 Limitations discovered in NetWorker releases previous to 7.4 (page 4 of 4)

Issue number	Description of limitation	Operating system affected	Product feature
"LGTpa81024" on page 196	Fatal error incorrectly reported no printer available to print a bootstrap on AIX 5.3.	AIX, Solaris, HP-UX, Tru64 UNIX, Linux	Messaging
"LGTpa54165" on page 196	Error message generated if the snapshot policy is configured to request more snapshots than a Savegroup can generate.	AIX, Solaris, HP-UX, Tru64 UNIX, Linux	Messaging
"LGTpa88065" on page 196	If a connection is lost during an NDMP backup to a NAS filer the NetWorker software stops responding.	All	NDMP
"LGTpa74026" on page 197	The **scanner** command might stop responding if it encounters an aborted save set backed up to an NDMP device.	AIX, Solaris, HP-UX, Tru64 UNIX, Linux	NDMP
"LGTpa28778" on page 197	NetWorker software fails to use tapes preinitialized in NDMP-enabled tape devices.	All	NDMP
"LGTpa65644" on page 197	NDMP save sets in status recyclable are not recoverable.	AIX, Linux, HP-UX, Solaris, Tru64 UNIX, Windows	Restore
"LGTpa48556" on page 197	Preventing duplicate filenames during recovery.	Windows	Restore
"LGTpa48322" on page 198	Windows error message during automated system recovery.	Windows	Restore
"LGTpa37508" on page 198	Limitation on browse and retention policy dates.	All	Restore
"LGTpa35856" on page 198	No message is logged if resource files are missing.	All	Restore
"LGTpa38176" on page 198	Cannot change the browse time if there are files for recovery.	All	Recovery

Backup operations problems and limitations descriptions

Windows management instrumentation database might stop responding

LGTpa41039

While performing a save of the Windows Management Instrumentation (WMI) database, the **save** process stops responding during a Microsoft application programming interface (API) call. A Microsoft API call should be nonblocking.

To work around this issue, obtain the hot fix for the Microsoft operating system bug. The Microsoft Knowledgebase article Q319579, *COM Activity Deadlock Causes IIS to Stop Responding,* contains more information on this hot fix.

Microsoft VSS backups on a FAT32 partition take longer than on an NTFS partition

LGTpa54620

VSS backups of files on a FAT32 partition take longer than VSS backups of files on an NTFS partition. This is a known Microsoft issue.

Backup might default to an incorrect server If the -s option is not specified with the save command

LGTpa83221

On a NetWorker client, if the -s servername option is not specified with the save pathname command, the save command does not select the first server name in the */nsr/res/servers* file. The save command selects the first server it contacts on the network.

Workaround

Use the -s servername option with the **save** command to specify a specific NetWorker server.

The /var/log/lastlog file causes a save process to appear to hang on RedHat AS4 x86_64

LGTpa79664

RedHat AS4 x86_64 creates a 4TB sparse file, /var/log/lastlog, during the install process. A save process that includes this file appears to hang while it reads the sparse file. The save process executes after the delay.

Save set status is displayed as invalid if a DSA backup is terminated due to an invalid backup path

LGTpa75719

If a DSA backup is terminated due to an invalid backup path, the save set status is displayed as invalid ss (for file type devices and tape devices) in the Volumes window. The Volume window should not display information about the save set status.

The /system/object and /system/contract directories are not skipped during a backup on Solaris 10

LGTpa73509

The **/system/object** and **/system/contract** directories should be skipped when running backups on a Solaris 10 operating system.

Create a .nsr file with directives to skip the **/system/object** and **/system/contract** directories.

If the directories are not skipped, error messages are reported during a backup. For example:

```
enoexec:/system/contract save: readdir overflow error, backup of
   directory cannot continue

enoexec: /system/contract        level=full,      3 KB 00:04:06      9
   files
```

Increase server parallelism to complete concurrent operations

LGTpa51184

There may be a need to increase the server parallelism value to complete the concurrent operations with an advanced file type device (AFTD) device when the number of simultaneous save sessions reaches the maximum value for server parallelism.

For example, if the server parallelism is set to 4, and there are 4 simultaneous saves going to an AFTD, set the server parallelism to 5 to complete a concurrent clone/stage operation from this AFTD while the four saves are in progress.

VSS on Windows Server 2003 x64 requires a Microsoft hotfix if Windows is running MSSQL Server or MSDE

LGTpa82436

Due to problems that Microsoft is encountering with certain VSS writers, VSS on Windows Server 2003 x64 requires a Microsoft hotfix if Windows is running MSSQL Server or MSDE. The Microsoft hot fix can be installed from the following:
http://support.microsoft.com/kb/913100

Backup will fail with remote exec service if passwords are not configured correctly

LGTpa75339

A backup will fail if the following is true:

- A NetWorker Remote Exec service on a client machine is configured so that the service is initiated by a local system account.
- The remote user and password field for the client is configured to use the same username and password as the Remote Exec service.

This error message is reported:

```
Cannot authenticate user: a required privilege is not held by the
client. Permission denied.
```

Workaround

To avoid this issue, configure the NetWorker Remote Exec service on the client to initiate with the local system account and populate the Remote User and Password fields of the client by using the NetWorker Administrator program.

SHAREPOINT save set cannot be excluded with directives when a save set of ALL is specified

LGTpa61694

The SHAREPOINT save set cannot be excluded with directives when a save set of ALL is specified for backup.

Command line backup and recovery of SYSTEM save sets

LGTpa58888

When backing up or recovering SYSTEM or VSS SYSTEM save sets from the command line, these limitations apply:

- A maximum of one SYSTEM or VSS SYSTEM save set can be included in the same **save** or **recover** command.
- File system directories cannot be specified in the same **save** or **recover** command.
- A maximum of one SYSTEM or the VSS SYSTEM save set can be specified in an input file.

Note: An input file is specified in a **save** or **recover** command with the **-I** option.

File system directories cannot be specified in an input file.

Examples of invalid command line entries include:

```
recover -s servername "SYSTEM DB:" "SYSTEM STATE:"
recover -s servername D:\letters "SYSTEM DB:"
save -s servername "SYSTEM DB:" "SYSTEM STATE:"
save -s servername D:\letters "SYSTEM DB:"
save -s servername -I D:\list.txt
```

Where **list.txt** is an input file. Examples of invalid input files include:

- The following input file is invalid because it includes a file system and a VSS SYSTEM save set:
  D:\letters
  VSS SYSTEM BOOT:
- The following input value file is invalid because it includes multiple VSS SYSTEM save sets:
  VSS SYSTEM BOOT:
  VSS SYSTEM SERVICES:

Examples of valid command line entries include:

```
save -s servername "VSS SYSTEM BOOT:"
save -s servername "VSS SYSTEM SERVICES:"
recover -s servername "VSS SYSTEM BOOT:"
recover -s servername "VSS SYSTEM SERVICES:"
```

Workaround

To back up multiple SYSTEM or VSS SYSTEM save sets in one operation, choose one of these options:

- In the NetWorker Administration window, edit the Client resource to include multiple SYSTEM or VSS SYSTEM save sets. Alternatively, ensure that the default save set All is selected for the Client resource.
- In the NetWorker User program, mark all of the required SYSTEM or VSS SYSTEM save sets and any other required save sets and then complete the backup.

To recover multiple SYSTEM or VSS SYSTEM save sets in one operation, from the NetWorker User program, mark all of the required SYSTEM or VSS SYSTEM save sets and any other required save sets and then complete the recovery.

The *NetWorker Administration Guide* contains more information about editing Client resources, using the NetWorker Administrator program or the NetWorker User program.

VSS backups of raw devices unsupported

LGTpa58422

NetWorker release 7.4 does not support the VSS backups of raw devices.

CLI problems and limitations descriptions

Using the withdraw command to withdraw a volume on a partitioned library fails

LGTpa87308

The withdraw command fails when a volume is withdrawn from a partitioned library.

Workaround

When using the **withdraw** command, specify the port number also. For example,

```
nsrjb -w -S 1 -P 2 -vvv
```

The ls -l command does not display files recovered from a NetApp Data ONTAP 6.5 file system

LGTpa91406

After performing a recovery from a NetApp Data ONTAP 6.5 file system mounted on a UNIX client (NFS share), the recovered files are not displayed if the **ls -l** command is entered.

Workaround

Unmount and remount the file system and the files are visible.

The mminfo command does not display a weekly summary of save set usage during the change to daylight savings time

LGTpa76457

If you use **mminfo** query to get a weekly save set usage summary during the change to daylight saving time (last Sunday of October and first Sunday of April), there is no information for the day of the change.

Perform a save set recovery when using the save command with the -I input_file option

LGTpa51045

When using the **save** command with the **-I input_file** option and one of the entries is deleted while the backup is running, the remaining entries in the input file are saved successfully. However, connecting directories are not saved and you are unable to perform index-based recoveries. The workaround is to perform a save set recovery.

Cloning problems and limitations descriptions

This section details the problems and limitations related to cloning operations.

Cloning on an EMC DART CFS 5.2 is not supported

LGTpa62490

Cloning on an EMC DART CFS 5.2 is not supported. The source tape begins reading data after the clone tape is mounted and the clone operation fails. The source drive does not exit the reading data state.

A clone error is reported in the /nsr/cores/nsrndmp_clone file.

Automatic cloning might fail when using a single staging policy

LGTpa70320

Automatic cloning fails when using a single staging policy if the following apply:

- Backup is to an advanced file type device.
- Server Parallelism value is set low (two or less).
- Recover space and check file system interval is approximately three and five minutes.
- High-water mark is set at a low value (approximately 10 percent).

This error message appears:

```
Error: nsrd: nonexistant cloneid (SSID) for save set(ss_name)
```

Compatibility problems and limitations descriptions

NetWorker software might stop responding when running SQL server 2000 and NetWorker client

LGTpa41044

On systems running both SQL Server 2000 and the NetWorker client, the NetWorker software might stop responding when obtaining device information on the client computer.

To work around this issue, obtain the hot fix for the Microsoft operating system bug. The Microsoft Knowledgebase article Q319246, *FIX: Error Dialog Box During SQL Server Database Backup* contains more information on this hot fix.

Configuration problems and limitations descriptions

Cannot deposit a volume from the CAP (I/O Port) using nsrjb -d command

LGTpa89947

Cannot deposit a volume from the CAP (I/O Port) using **nsrjb -d** command. A silo volume deposit requires the **-T** and **-a** options in sequence to add a volume in the media database.

The sequence of operations is:

```
nsrjb -d -T BarCode
```

Ignore the error message that appears.

```
nsrjb -a -T Barcode
```

Removable storage manager jukebox configures all devices automatically

LGTpa57709

When using the **jbconfig** command to configure a tape drive, a Removable Storage Manager (RSM) jukebox configures all devices automatically and picks the most generic device type available. For example, if you are configuring a 4 mm 20 GB tape drive, the RSM jukebox defines the device as a 4 mm type device, not 4 mm 20 GB. Likewise, if you are configuring a DLT8000 device, it is configured as DLT. Therefore, you might not receive the same performance and usage as with a fully defined device.

Change journal manager problems with multiple servers

LGTpa35407

Configuring multiple NetWorker servers to back up a client with Change Journal enabled is unsupported. Such a configuration can cause problems in the Change Journal Manager.

A volume's Change Journal state (enabled or disabled) is maintained in the client computer's registry. This key is created the first time the client is backed up with Change Journal enabled. If a second NetWorker server backs up the same client while Change Journal is enabled, a second registry key is created. These keys are named for the NetWorker server that performed the backup.

For example, the following registry keys will be present on a client that is backed up by two servers while Change Journal is enabled for at least one volume:

```
HKEY_LOCAL_MACHINE
   SOFTWARE
   Legato
   NetWorker
   Change Journal
   Server1
   Server2
```

If a volume's Change Journal state appears enabled in the **Server1** key and disabled in the **Server2** key, you cannot edit the volume's settings by using the Change Journal Manager.

When the volume is selected, the NetWorker Uses Change Journal checkbox is dimmed, indicating that components controlled by the checkbox have different states. Details of each volume's state are displayed in the textbox.

Note: No data is lost if a backup occurs while the client is configured using the following.

If you experience this problem, perform these procedure on the client:

1. Stop the NetWorker services.
2. Start the **regedit** program.
3. Expand the **HKEY_LOCAL_MACHINE›SOFTWARE›Legato›NetWorker›Change Journal.**
4. As an optional precaution, select the NetWorker key, and select **Export Registry File** from the **Registry** menu to save a copy of the current configuration.
5. Select the key for one of the servers under **Change Journal** and delete all of the values the key contains. (Do not delete the server key itself).

6. Repeat step 5 for each server key under **Change Journa**l.
7. Restart the NetWorker services.

Use Change Journal Manager to enable or disable the Change Journal on each of the client computer's volumes.

Devices and media problems and limitations descriptions

Misleading error message reported if an invalid NDMP storage node password is entered when labelling a volume

LGTpa83273

If an invalid NDMP storage node password is entered when labelling a volume, the error message does not indicate that the password is incorrect. Instead, this error message is reported:

```
command operation `LOAD', command ID 231 is not connected
```

Device operations using the right-click option might be lost

LGTpa83579

Device operations that use the Console are limited if a resource was created by a pre-7.4 release NetWorker server that used the **nsradmin** program in nonvisual mode. Mount, unmount, and label operations cannot be performed by using the right-click option.

Workaround

Delete and re-create the device.

Note: This limitation only occurs when the Type attribute is in lowercase.

Media capacity notification not logged in the media database

LGTpa82503

When the maximum number of save sets for a volume is reached, no notification is logged in the media database indicating a volume reached capacity.

labelling volumes concurrently might fail when using NMC

LGTpa80901

When labelling a volume by using the NetWorker Console, concurrent label operations might fail if one of these conditions is true:

- Two or more label operations are running concurrently.
- The operation is using the same pool, or two pools with the same label template.

This error message appears:

```
Error: Duplicate volume name `rh64.014'. Select a new name or remove
the original volume."
```

Workaround

Use the **nsrjb** command to perform concurrent label operations. The *NetWorker Command Reference Guide* or the UNIX man pages has more information on the **nsrjb** command.

The udev tool is unsupported on Emulex running Linux RedHat AS 4 using default kernel 2.6

LGTpa87657

The **udev** tool is unsupported on Emulex running Linux RedHat AS 4 using default kernel 2.6.

The jbconfig command might fail on Windows 2003 with a multidrive jukebox

LGTpa74492

When configuring media libraries on Windows Server 2003, the **jbconfig** command might fail with this error:

```
jukebox error: scsi command MODE_SENSE failed.
```

If this error message appears:

1. Right-click **My Computer** and select **Manage**.
2. Select **Device Manager.**
3. Right-click the effected library and select **Disable**.
4. Rerun the **jbconfig** command.

Tape gets stuck in a drive when labelling Linux Red Hat

LGTpa68867

While labelling tape in a DDS configuration by using a NetWorker server that is running Linux Red Hat, the tape becomes stuck in the drive and this error message is displayed:

```
unload failure-retrying 30 seconds
```

To prevent a tape from being stuck in the drive, set the auto_lock setting to “0” (Off) in the /etc/stinit.def file for these drive types:

- Sony AIT-2 and AIT-3
- IBM LTO Gen1
- HP LTO Gen1
- IBM LTO GEN2
- IBM 3580 drive LTO-1
- IBM 3592 J1A
- Quantum DLT 7000

By default the auto_lock setting is set to **1** (On).

Error message appears in daemon log file when labelling a volume that contains PowerSnap save sets

LGTpa54632

When labelling a volume that contains PowerSnap save sets, this error message appears in the daemon log file:

```
nsrmmdbd: error, null
```

Ignore the error messages in the daemon log file. No actual error occurred.

Slow Solaris tape operations when using an IBMtape driver with IBM LTO-2 tape drives and the NetWorker CDI

LGTpa55128

Solaris tape operations are slow when using an IBM tape driver with IBM LTO-2 tape drives when **CDI** is turned on.

Note: This behavior is seen with the Solaris **st** driver.

Workaround

Turn **CDI** off.

NetWorker software attempts to eject a stuck tape

LGTpa51725

If a hardware problem results in a tape becoming stuck in a drive, the NetWorker software tries to eject the tape instead of continuing the backup on another tape. In this situation, save stream backups from clients intended for the stuck tape/drive might fail.

If the NetWorker software keeps trying to eject a stuck tape:

1. Mark the volume as read-only.
2. Disable the drive.
3. Manually eject the tape.
4. Inventory the slot to which the tape was ejected.
5. Resolve the hardware error that led to the tape becoming stuck in the drive (for example, a faulty tape or a faulty drive).
6. Reenable the drive.
7. Mark the volume appendable again (if appropriate).

Volume retention information does not apply to volumes that contain snapsets

LGTpa66565

The output produced by the **mminfo** command by using the **volretent** flag (the date the last save set on this volume expires) does not apply to volumes that contain snapsets.

Increase the value of the save mount time-out attribute when auto media management is enabled and a corrupt tape is encountered

LGTpa50485

Note: This issue has only been seen on SDLT110/220 drives.

A label operation may take more than 30 minutes before it fails under these conditions:

- Automedia management is enabled and a backup is initiated.
- The NetWorker software encounters a corrupted tape during label operations.

The NetWorker software keeps a record of the location of the corrupted tape only for the current backup operation, so a corrupted tape could be used again for the next backup operation if the operator does not remove it.

Workaround

To increase the value of the **Save Mount Time-out** attribute to 60 minutes from the default 30 minutes:

1. In the **NetWorker Administrator** program, select **Devices** from the **Media** menu to open the **Devices** window.
2. From the **View** menu, select **Details** to display the hidden attributes.
3. Set the **Save Mount Time-out** attribute to 60 minutes.

Volume remains in the tape drive if the storage node nsrmmd is not responding in a shared drive environment with DDS

LGTpa45470

In a shared drive environment, volumes remain in the physical drive when these conditions exist:

- The drives are accessed by multiple storage nodes through DDS.
- The NetWorker server is unable to communicate with the **nsrmmd** daemon on any storage node.
- The storage node has loaded or mounted volumes onto shared drives.

Label tape operation fails on an HP-UX platform if CDI is turned on and IBM tape driver is used

LGTpa58356

On an HP-UX platform, a label tape operation fails with this error message if CDI is turned on and an IBM tape driver is used:

```
Error: while operating on slot `1': write open error: drive status is
Drive reports no error - but state is unknown
```

Workaround

To avoid a failed label tape operation, turn off **CDI**. The IBM Atape driver version 3.0.1.8 does not display this behavior. The *EMC NetWorker Hardware Compatibility Guide* contains more information and is available at https://support.emc.com/.

Jukebox fails to allocate enough devices

LGTpa58215

When the NetWorker jukebox control command (**nsrjb**) attempts to access an eligible drive to complete a NetWorker service daemon (**nsrd**) task, the drive reports as busy. This error message is displayed:

```
Error 'nsrd: Jukebox 'xx' failed cannot allocate enough devices
```

Workaround

Wait for the eligible drive to become free and retry the operation. If the problem persists, contact EMC Technical Support.

Entering the inquire command during tape activity causes a device error

LGTpa50089

Issuing the **inquire** command from the command line while there is any tape activity, such as labelling of tapes or backing up of data, might cause an operating system crash or a device I/O error.

The nsrjb -L and -I operations fail with an Exabyte Mammoth-2 tape drive with Fibre Channel device

LGTpa37996

When using the **nsrjb -L** and **-I** commands to perform inventory and tape label operations, the NetWorker software reports this error message with an Exabyte Mammoth-2 tape drive with a Fibre Channel device:

```
timestamp /dev/rmt/2cbn Tape label read for volume? in pool?, is not
recognized by Networker: I/O error"
```

Workaround

Update the firmware on the Exabyte Mammoth-2 tape drive with Fibre Channel device to version v07h, and the changer firmware to 3.03 or later.

Tape drive requires cleaning error message

LGTpa36367

When trying to create a tape backup, the Windows 2000 dlttape.sys device driver may read and report soft and hard errors on digital linear tape (DLT) drives. When this occurs, the backup is not created and this error message appears:

```
Tape Drive Requires Cleaning
```

A supported hot fix is now available from Microsoft, but apply it only to systems experiencing this specific problem. Therefore, if you are not severely affected by this problem, Microsoft recommends waiting for the next Windows 2000 service pack containing this fix. To resolve this problem immediately, contact Microsoft Product Support Services to obtain the hot fix.

Unable to configure an ACSLS silo on Windows with lib_attach 1.4.1

LGTpa89859

The NetWorker software is unable to configure an ACSLS silo on Windows with lib_attach 1.4.1. If the NetWorker **nrsexecd** service is started first, it begins serving the portmapper services on port 111. In this situation, the Windows Services for UNIX portmapper is unable to start, causing dependent services to fail. Conversely, if the Windows Services for UNIX portmapper is started first, the NetWorker **nsrexecd** process will simply not service portmapper requests on port 111, allowing both products to coexist without problems.

Workaround

1. Shut down the NetWorker daemons.
2. Add a value to the Windows Registry to delay the start of the **nsrexecd** service until the Windows Services for UNIX portmapper is running. Technical Bulletin 375: Portmapper Conflict between NetWorker and Microsoft Windows Services for UNIX is available at http://Powerlink.EMC.com
3. Restart the NetWorker daemons.

GUI problems and limitations descriptions

Cannot launch the NetWorker Console from a Linux PowerPC client or using the browser of another supported Operating System

LGTpa87730

The NetWorker Console client GUI is unsupported on a PowerPC Linux client. Client operations must be performed from the NetWorker Console server.

1. Above **Required-Start: networker** script, add these two lines to the file:

   Default-Start: 3 5

   Default-Stop: 0 1 2 6

2. Run the **chkconfig --add gst** command:

   This command adds a symbolic link to the gst script in the **/etc/init.d/rc3.d** and **/etc/init.d/rc5.d** directories.

Cannot run commands in nsradmin without the nsrexecd daemon

LGTpa77990

To increase datazone security, running the **nsradmin** program, or any other NetWorker command on a host without the **nsrexecd** daemon running, is unsupported.

New authentication fails if you run the **nsradmin** program without the **nsrexecd** daemon. If old authentication is disallowed in a datazone, the **nsrexecd** daemon is required to connect to the server even when running **nsradmin** from a client.

Remote client save sets with Japanese characters are displayed incorrectly

LGTpa82555

The **nsrinfo** and **recover** commands display remote client save sets with Japanese characters incorrectly. The command line on Windows does not support UTF-8 natively so the Japanese characters will not display correctly.

Note: This behavior does not occur when using the **mminfo** command or browse Japanese files from **winworkr** or NetWorker Console.

Files backed up from a VSS system file set appear in the file system tree

LGTpa83820

On a Windows 2003 operating system, saving a VSS save set, such as VSS SYSTEM FILESET: or VSS SYSTEM SERVICES: creates index entries for backed-up files as well as their parent directories. This can cause problems when browsing the recover items by displaying the version from the VSS backup as part of the file system.

Note: If the VSS system saves sets are marked along with the file system, the save sets will fail to recover and the status will indicate those folders failed (for example, you select **My Computer** using the **winworkr** program). This is expected behavior.

SCSI device ID displayed differently than NetWorker NDMP devices

LGTpa53364

For NetWorker NDMP devices, the bus number in the control port is offset by a value of 1,024 so that they occupy a different range compared to a locally attached SCSI jukebox. This offset helps visually differentiate the type of device (NDMP or non-NDMP). The actual value of the NDMP device bus number can be obtained from the NDMP Bus Number field. This is found if you select Jukeboxes from the Media menu.

All client file index entries might appear not to have been deleted

LGTpa56231

The NetWorker software does not delete all client file index entries under these conditions:

- All save sets are recycled.
- Volumes are deleted.
- Device is relabelled.

After running the **nsrck -L6** command, the **nsrinfo** *client* output command indicates there are still browsable files.

This is an issue only when all save sets for a client are deleted from the media database. If there is at least one valid save set for that client in the media database, the **nsrck -L6** command deletes the invalid save set records from client file index.

Note: This requirement might be more apparent with AFTD as it supports concurrent operations, but it is applicable to all other device types with a similar setup.

Microsoft Windows username cannot contain a '!' character

LGTpa86214

NMC does not launch correctly if a Microsoft Windows username contains a '!' character. This error message is displayed:

```
"Can't find bundle for base name res/gwt_rb, locale en_US"
```

NMC can be launched from the same machine when logged in as a user with no special characters in the name.

Installation problems and limitations descriptions

No alternative location provided for the java14.sdk.tar file if the /tmp directory is full

LGTpa80764

After installing the NetWorker Console server on an AIX platform, if the /tmp directory does not have enough space for the java14.sdk.tar JRE file, this error message appears:

```
There is not enough room on the disk to save /tmp/uontdicn.tar. Remove
unnecessary files from the disk and try again, or try saving in a
different location.
```

ASR and non-ASR recovery fails if the windows install CD does not match the service pack level of the data being backed up

LGTpa83706

If you have installed a Service Pack on a client machine, you will not be able to perform an automated system recovery (ASR) or non-ASR recovery unless the data you are trying to backup has the same service pack(s) incorporated into the backup. For example, this behavior occurs if you backed a Windows 2003 Server SP1 machine and then use a Windows 2003 Server CD during the recovery.

To ensure an ASR recovery succeeds, use a Windows install CD that matches the service pack level of the backed-up data that you are trying to recover. Otherwise, an ASR recovery will not succeed. NetWorker Procedure Generator contains more information on a Windows non-ASR recovery if the backup and the CD do not match.

Error downgrading to business edition

LGTpa50807

The licensing utility (**nsrcap**) cannot downgrade to the Business Edition from a higher enabler.

Workaround

To downgrade from Power Edition or Network Edition to Business Edition:

1. Enter the computer's hostname in the License Server attribute, if a license service is not specified:
   a. In the **NetWorker Administrator** program on the NetWorker server, select **Server Setup** from the **Server** menu.
   b. From the **View** menu, select **Details**.

c. Enter the hostname in the **License Server** attribute and select **Add**.

2. Delete the base enabler of the edition being downgraded:
   a. From the **Server** menu, select **Registration**.
   b. In the **Registration** window, select the NetWorker product whose enabler code you want to delete.

      A series of windows appear.

   c. Click **OK** in the windows and repeat the steps to delete the base enabler.
3. Select the hostname from the NetWorker server's **License Server** attribute:
   a. From the **Server** menu, select **Server Setup**.
   b. From the **View** menu, select **Details**.
   c. Select the hostname in the **License Server** attribute that was entered in step 1 and click **Delete**
   d. Click **Apply**.
4. Enter the Business Edition enabler code:
   a. From the **Server** menu, select **Registration**.
   b. Click the **Create**.
   c. Type the Business Edition enabler code in the **Enabler Code** attribute and click **Apply**.

Licensing problems and limitations descriptions

NetWorker License Manager allowance limitation

LGTpa62224

If NetWorker License Manager is used to allocate licenses to specific servers, wait a minimum of two minutes. Failure to allow two minutes for the synchronization to occur may result in incorrect assignment of a license to the server.

Localization problems and limitations descriptions

For more information on localization important notes and tips, see "Internationalization support" on page 199.

The XAPPLRESDIR environment variable must be set to operate the NetWorker Console on HP-UX

LGTpa79450

To operate the NetWorker Console on HP-UX that is running a non-English locale, the **XAPPLRESDIR** environment variable must be set as follows:

```
XAPPLRESDIR=/usr/lib/X11/app-defaults
```

Messaging problems and limitations descriptions

Fatal error incorrectly reported no printer available to print a bootstrap on AIX 5.3

LGTpa81024

After a save group operation completed successfully, the Completed Successfully table of the Group Details window incorrectly reported a fatal error. This window indicates there is not a printer available to print the bootstrap.

Error message generated if the snapshot policy is configured to request more snapshots than a Savegroup can generate

LGTpa54165

If a snapshot policy is configured to request more snapshots than a savegroup can generate for a group in a given time, the savegroup generates this error message when running the group, and does not back up that group:

timestamp savegrp: RAP error: Invalid snapshot policy with *number_of_requested_snapshots* snapshot creation per day. NetWorker will not be able to create, *number_ of_ requested_ snapshots* from *timestamp* in a single day.

Workaround

To resolve this issue, do one of the following:

- Modify the savegroup Start Time and Interval attributes of the Group resource to synchronize the resource with the snapshot policy.
- Modify the snapshot policy to synchronize it with the Group resource.

The *NetWorker Administration Guide* contains more information on modifying the Start Time and Interval attributes and snapshot policies.

NDMP problems and limitations descriptions

If a connection is lost during an NDMP backup to a NAS filer the NetWorker software stops responding

LGTpa88065

If a connection is lost during an NDMP backup to a NAS filer, a connection reset by peer error is written to the daemon log file, but the **nsrndmp_save**, **ndmp2fh** and **nsrmmd** processes stop responding. The tape device also appears in writing mode, but stops responding.

Workaround

Stop the **nsrndmp_save, ndmp2fh** and **nsrmmd** processes by using **kill -9**l command, and restart NetWorker daemons to free the tape device.

The scanner command might stop responding if it encounters an aborted save set backed up to an NDMP device

LGTpa74026

The **scanner** command might stop responding if:

- The **scanner** command encounters a save set backed up to an NDMP device.
- The save set aborts after the start note is written.
- The last complete save set was backed up to the device and cannot be scanned.

NetWorker software fails to use tapes preinitialized in NDMP-enabled tape devices

LGTpa28778

If a new tape is preinitialized in an NDMP-enabled tape device, the NetWorker software does not use the tape.

To ensure that NetWorker software uses all tapes in an NDMP tape device:

- Do not use tapes that were preinitialized in an NDMP-enabled tape device.
- Label preinitialized tapes in a non-NDMP tape drive before inserting the tape into an NDMP tape drive or jukebox.

Restore problems and limitations descriptions

NDMP save sets in status recyclable are not recoverable

LGTpa65644

NDMP save sets cannot be recovered if they are in the status eligible for recycling. This error message appears:

```
Failed save set, not recoverable
```

Workaround

Set the status of the save set to **recoverable**. More information on changing the status of a save set to recoverable is provided in the **nsrmm** and **mminfo** entries in the *NetWorker Command Reference Guide* or the UNIX man pages.

Preventing duplicate filenames during recovery

LGTpa48556

Because of the case-sensitive nature of Portable Operating System Interface (POSIX) compliance, NetWorker software can restore a file when another file exists with the same name but different case. For example, if the **FILE1.DOC file** exists on the target client, restoring **file1.docfile** can result in two files with the same name but different case. The contents of the two files may or may not be the same.

To avoid this problem, disable POSIX compliance by setting this system environment variable:

```
NSR_DISABLE_POSIX_CREATE=YES
```

The Windows online help contains detailed instructions about setting system environment variables.

Windows error message during automated system recovery

LGTpa48322

Due to a problem in Windows XP Professional and Windows Server 2003, this error message may appear when you start an ASR disaster recovery of a client computer:

```
Can't create partition...
```

This error is intermittent. To work around the problem, restart the ASR recovery.

Limitation on browse and retention policy dates

LGTpa37508

Client file index browse and save set retention policies can be set no later than the year 2038. This is caused by an operating system limitation in which support for time is limited to a maximum of 68 years starting from the year 1970.

Note: An expired save set retention date does not immediately result in the save set being overwritten.

Save sets can only be overwritten if the following is true:

- The retention policy has expired and NetWorker uses the storage volume for backup.
- The storage volume is relabelled.
- Entries are manually deleted from the storage volume.

Workaround

To enable full browse and retention policies beyond the year 2038, use the NetWorker Archive feature. Archived data is never subject to automatic recycling, so it cannot be accidentally overwritten.

No message is logged if resource files are missing

LGTpa35856

If one or more resource files are somehow removed from the NetWorker resource database directories (as a result of disk corruption or manual deletion, for example), no error message is logged in the daemon log file.

Cannot change the browse time if there are files for recovery

LGTpa38176

The following warning message is displayed if you attempt to change the browse time if files are marked for recovery.

```
There are files marked for recovery.
OK to ignore the marked files.
Cancel to stay with the current browse time.
OK / Cancel
```

Unmark files for recovery before attempting to change the browse time.

Internationalization support

These sections describe important notes and tips pertaining to the internationallization support for the NetWorker release.

Additional information on support for internationalization can also be found in the *NetWorker Administration Guide* in the NetWorker Server Management chapter.

Locale and Code Set Support

NetWorker software does not support locales (defined by your operating system) or code sets that remap characters having special meaning for filesystems. Depending on the filesystem, these special characters can include the forward slash (/), the backslash (\), the colon (:), or the period(.). De_DE.646 is an example of one unsupported locale.

NetWorker software might function normally in such an environment, but might not function normally if the locale is changed (the previously existing indexes can become invalid).

Localization support

These sections describe important notes and tips pertaining to localized NetWorker releases.

Important notes and tips

The NetWorker 8.0 software supports language packs, which can be installed as part of the NetWorker installation process, or can be installed separately after the NetWorker software has been installed. Note, however, that any program screens or messages that have changed since release 7.5 Service Pack 1 are not localized.

The following sections contain important notes and tips, as well as limitations, pertaining to the internationalized NetWorker software:

- "Localized software contains some English Text" on page 200
- "Java Web Start cache path and non-English characters" on page 200
- "Fonts may not display correctly in UNIX Motif GUIs in non-english locales" on page 200
- "Locale settings with NDMP" on page 201
- "Display of an unsupported character in the current locale" on page 201
- "Man page locales" on page 201
- "Supported Locales" on page 201
- "Changing the Locale in the NMC GUI" on page 202
- "Scheduled backup or Archive Requests of non-ASCII files or directories" on page 203
- "Maximum NetWorker supported path" on page 203
- "In non-English environment, character encoding used for NMC client and NetWorker client must be the same" on page 203

- "The NMC Japanese Online Help displays incorrect characters on Linux systems" on page 204
- "Non-ASCII hostnames are not supported by NetWorker" on page 204
- "JRE 1.6 users cannot export reports as PDF documents for non-English locales on AIX and HPUX" on page 204
- "JRE 1.6 users cannot export reports as PDF documents for non-English locales on AIX and HPUX" on page 204
- "The nwrecover program will not start on Linux platforms for Asian Languages if the necessary fonts are not installed" on page 204
- "Recovering a large number of files may take a long time in the French locales on Solaris" on page 204
- "Garbled characters may appear in the NetWorker Console GUI font list on Solaris" on page 205
- "Problem with highlighted text in the NetWorker Console Help program after performing a search using JRE 1.5.x for Asian languages" on page 205
- "Entering non-ASCII characters in NetWorker user interfaces" on page 205
- "Non-ASCII save set names are displayed incorrectly in nsradmin visual mode on Linux" on page 205
- "The XAPPLRESDIR environment variable must be set to operate the NetWorker Console on HP-UX" on page 205

Localized software contains some English Text

Messages and strings that were added after the NetWorker 7.5 Service Pack 1 release have not been localized. Some strings from the operating system have also been left intentionally unlocalized. The **nsrwatch** and **nsradmin** programs are not localized. The English language components do not affect the functionality of the software.

The only RAP value that supports non-ASCII characters is the Save Set attribute of the Client and Archive Request resources.

Java Web Start cache path and non-English characters

If the path for the Java Web Start cache contains non-English characters, this will cause the NetWorker Console to fail to launch. The resolution to this problem is to change the Java Web Start cache path to a path that contains no non-English characters.

The Java Web Start cache path is changed in the Java Web Start Console. Different JRE versions have different names for the Java Web Start Console; consult java.sun.com for details.

Fonts may not display correctly in UNIX Motif GUIs in non-english locales

If you are having trouble displaying fonts in the nwrecover program, for your current locale, ensure that the operating system is configured to display them.

Locale settings with NDMP

When running NDMP backups, the locale setting has to be consistent in your environment. All UNIX operating system locale settings on the filer (including UTF-8) must be the same and the NMC client can only be run on an UNIX client set to the exact same locale setting as the filer.

Backup and recovery operations can be run on any locale, but if you try and browse on a locale that is different from the original locale the filenames will show up as random characters.

Display of an unsupported character in the current locale

If the NetWorker software encounters a character that is unsupported in the current locale, it replaces the character with a '**?**'.

Man page locales

Man pages are displayed based on the locale setting for a specific language. The following EUC locales are supported:

- Chinese**: EUC-CN**
- French**: ISO8859-15**
- Korean**: EUC-KR**
- Japanese**: EUC-JP**

If the locale is not set to a specific language matching an installed language pack, the man pages will be displayed in English.

Supported Locales

Table 20 on page 201 lists the supported locales.

Table 20 Supported Locales (page 1 of 2)

Language	Operating system				
	Windows	**Solaris**	**HPUX**	**AIX**	**Linux**
English	English	OS Default Locale	OS Default Locale	OS Default Locale	OS Default Locale
French	French (France)	UTF-8 ISO8859-1 ISO8859-15	UTF-8 ISO8859-1 ISO8859-15	UTF-8 ISO8859-1 ISO8859-15	UTF-8 ISO8859-1 ISO8859-15
Japanese	Japanese (Japan)	UTF-8 EUC-JP S-JIS	UTF-8 EUC-JP	UTF-8 EUC-JP	UTF-8 EUC-JP S-JIS

Table 20 Supported Locales (page 2 of 2)

Language	Operating system				
	Windows	Solaris	HPUX	AIX	Linux
Chinese	Chinese (China)	UTF-8 EUC-CN GB18030 GBK BIG5	UTF-8 EUC-CN	UTF-8 EUC-CN	UTF-8 EUC-CN GB18030 GBK BIG5
Korean	Korean (Korea)	UTF-8	UTF-8	UTF-8	UTF-8

Note: Localization is not supported on the Mac OS, Tru 64 or SGI platforms.

Changing the Locale in the NMC GUI

There are three conditions for the displayed textual elements (messages, dates, time and numbers) in the NMC GUI:

1. If there is an appropriate NetWorker language pack installed on the NMC server, all textual elements will be rendered to the current user locale.
2. If no NetWorker language pack is installed on the NMC server, all textual elements will be rendered to English.
3. If the locale is neither supported by the NetWorker software nor has an appropriate NetWorker language pack installed, all textual elements will be rendered to English, except dates, times and numbers which will appear in the current user locale that is supported by the installed JRE on the user host.

The NMC GUI must be restarted to apply any change to the locale.

Example 1

There is a French language pack installed on the NMC server and the user locale is French. The user logs in to the NMC server. In the NMC GUI, all textual elements will be in French.

Example 2

The installed JRE supports French and the user locale is French. There is no French (France) language pack installed on the NMC server. In the NMC GUI, all texts and messages will be in English, except dates, time and numbers will be in French.

It is the user's responsibility to change the locale and apply the change correctly to the operating system. For example, changing and applying the locale to Windows server 2003 and Solaris 5.9 are as follows:

Windows server 2003

a. Click **Start**.

b. Select **Control panel › Regional and Language Options › Regional Options.**

c. Select the language.

d. Select the location.

e. Click **Ok**.

Solaris 5.9

a. Logout to the **Welcome** dialog box.

b. Click **Options** › **Language**.

c. Select the language.

d. Log in.

Note: Date and times may be still in North American format. Not all date and time displayed are internationalized. This is a known deficiency that will be addressed in a future release.

Scheduled backup or Archive Requests of non-ASCII files or directories

The value of the **Save Operations** attribute in Clients or Archive Requests resource should be set to:

- NetWorker UNIX clients at release 7.4 or later: **I18N:mode=nativepath**.
- NetWorker UNIX clients at a release level prior to 7.4: **I18N:mode=utf8path**.
- Microsoft Windows clients: **I18N:mode=utf8path**

If the Client Configuration wizard is used to create the Clients resource, the Save Operations attribute will be automatically filled-in based on the client platform when non-ASCII save sets are specified.

Maximum NetWorker supported path

The maximum length of the NetWorker supported path has increased to 12 KB. The number of characters supported in the path is dependent on the language of the characters *and* any specific operating system limitations.

Non-English characters require more bytes than English characters. Ensure that the filepath and directory names remain within the limits imposed by the operating system and the NetWorker software.

In non-English environment, character encoding used for NMC client and NetWorker client must be the same

LGTsc21657

In a non-English environment, characters do not display correctly if the character encoding is different on the NMC client than the files on the NetWorker host that are being browsed.

Workaround

In a non-English environment, ensure that the NMC client uses the same character encoding as the files on the NetWorker client host that are to be browsed.

For example, if the NMC client uses the zh_CN.EUC locale it will not properly display files that were created using the zh_CN.UTF-8 locale. The character encoding used for the NMC client and NetWorker client must be the same to ensure the proper display of characters. In this example, the NMC client should be started using the zh_CN.UTF-8 locale.

The NMC Japanese Online Help displays incorrect characters on Linux systems

LGTsc02862

The NMC Japanese Online Help displays incorrect characters on Linux systems due to limitations with the Javahelp software. These limitations affect the software's ability to display fonts in the help viewer content pane.

Due to this limitation in Javahelp the only character encoding that appears is the system default; not the font defined by the user.

Non-ASCII hostnames are not supported by NetWorker

LGTsc26980

NetWorker does not support hosts that have non-ASCII characters in the hostname.

JRE 1.6 users cannot export reports as PDF documents for non-English locales on AIX and HPUX

LGTsc26288

The NetWorker option to export reports in Acrobat PDF format is not supported on AIX and HPUX hosts that are running JRE 1.6 in a non-English locale.

The nwrecover program will not start on Linux platforms for Asian Languages if the necessary fonts are not installed

LGTsc02808

The **nwrecover** program will not start on Linux platforms for Asian Languages if the necessary fonts are not installed.

Workaround

Install the following font packages:

- ttf-founder-simplified-0.20040419-6.1.noarch.rpm
- ttf-founder-traditional-0.20040419-6.1.noarch.rpm

Recovering a large number of files may take a long time in the French locales on Solaris

LGTsc05339

In the French locale on Solaris, a degradation in performance may be seen when recovering a large number of files (greater than 100,000).

To improve performance, expand the command dialog box to reveal the complete pathnames of the files being recovered in the output field.

Garbled characters may appear in the NetWorker Console GUI font list on Solaris

LGTsc03894

Garbled characters may appear in the NetWorker Console GUI font list for font names if the fonts do not have English names, or the localized names are not recognized by the JRE.

Problem with highlighted text in the NetWorker Console Help program after performing a search using JRE 1.5.x for Asian languages

LGTsc02814

Due to a known limitation with JRE 1.5.*x* (Sun bug 6375606), text that is highlighted in the NetWorker Console Help program after a search has been performed will not be highlighted correctly. Update the JRE version to 1.6 or later.

Entering non-ASCII characters in NetWorker user interfaces

LGTpa88887

Non-ASCII characters are supported only for the **Save Set** attribute in **Client** and **Archive Request** resources. However, user interfaces such as NMC do not prevent the user from entering non-ASCII characters for other attributes in NetWorker resources.

Non-ASCII save set names are displayed incorrectly in nsradmin visual mode on Linux

LGTpa92833

Non-ASCII save set names are displayed incorrectly in **nsradmin** visual mode on Linux.

Workaround

To work around this limitation, perform one of the following:

- Use the **print nsr client** command in **nsradmin** window to view the non-ASCII save set.
- Use the Console GUI on the Linux client to view the non-ASCII save set.

The XAPPLRESDIR environment variable must be set to operate the NetWorker Console on HP-UX

LGTpa79450

To operate the NetWorker Console on HP-UX that is running a non-English locale, the **XAPPLRESDIR** environment variable must be set as follows:

```
XAPPLRESDIR=/usr/lib/X11/app-defaults
```

Technical notes

This section describes important notes and tips for using the NetWorker software.

NetWorker cloud backup option and network connectivity

Cloud backups are highly dependent on the network connection that is used to access the service. Any disruption in connectivity or a slowdown in network access speed may adversely affect cloud backups or recoveries.

Additionally, if you define large Network Write Sizes for the cloud device, make sure to set the Send/Receive Timeout attribute proportionally high to avoid read/write timeouts. Optimal values for send/receive timeouts vary depending on the network speed and bandwidth.

Open File Management on Microsoft Windows

NetWorker clients will automatically use VSS for file system backups, avoiding the need for Open File Manager. A license is not required when used in conjunction with a NetWorker server. NetWorker clients prior to release 7.4 Service Pack 2 also automatically use VSS for file systems backups, whether or not the NetWorker VSS Client for Microsoft Windows is installed. However, those clients will require a NetWorker VSS Client Connection license.

Table 21 Recommended management of open files

Windows 2000 and XP	Windows 2003	Windows 2008 and Vista
No VSS is available in the operating system. For all versions of NetWorker, use Open File Manager to back up open files.	Use VSS to back up open files. • If both client and server are using release 7.4 Service Pack 2 or later, no VSS Client Connection license is required. • If client or server are at using a release prior to 7.4 Service Pack 2, a VSS Client Connection license is required.	Use VSS to back up open files. • If both client and server are Windows 2008, no VSS Client Connection license is required. • If the client is Windows Vista and the server is using release 7.4 Service Pack 2 or later, no VSS Client Connection license is required. • If a Windows 2008 or Vista client is used with a server using a release prior to 7.4 Service Pack 2, a VSS Client Connection license is required.

EMC NetWorker License Manager not supported on Solaris Opteron platform

The 7.6 NetWorker release does not support the EMC NetWorker License Manager on the Solaris Opteron platform.

NetWorker Management Console does not support Microsoft Internet Explorer version 7.0

Microsoft Internet Explorer version 7.0 is not supported by NMC on any Windows platforms except Microsoft Vista.

A server does not support a NetWorker client running release 7.2.x or earlier

A NetWorker server does not support a NetWorker client running release 7.2.*x* or earlier.

Single clients or archive requests resource for UNIX non-ASCII paths support only one locale

A single Clients or Archive Requests resource supports non-ASCII UNIX paths belonging to only one locale. If you have paths in multiple locales, you must create multiple Clients or Archive Requests resource. A Clients or Archive Requests resource supports paths only from a single locale on UNIX.

Note: This limitation does not apply to Microsoft Windows paths.

VMware qualification

NetWorker release 8.0 and later is qualified with VMware. The *NetWorker Administration Guide* and the *EMC NetWorker Release 8.0 VMware Integration Guide* provide more information on support for VMware.

Symbolic links are not restored during DAR recovery with NetApp

During a DAR recovery, symbolic links for files, directories, and other specific files, such as device files or named pipes, cannot be recovered. To recover these files, use the NetApp **restore** command with the **-x** option. The Network Appliance documentation has more information about the NetApp restore command.

SYSTEM save set archive unsupported on Microsoft Windows

Archiving of SYSTEM or VSS SYSTEM save sets is not currently supported.

NetWorker connections through a firewall

The **NSR_KEEPALIVE_WAIT** variable sets the timeout limit that the **nsrexecd** daemon uses to keep messages active once a connection to the NetWorker server has been established through a firewall. The period that **nsrexecd** will send keep-alive messages to **nsrexec** is adjustable by the **NSR_KEEPALIVE_WAIT** environment variable. Set this environment variable to the desired number of seconds between keep-alive wait messages. If the **NSR_KEEPALIVE_WAIT** variable is not set or is set to an invalid value, (0, a negative number, or a nonnumeric string) then no keep-alive message is sent.

Pause recommended between file creation and backup with EMC IP4700

If a level 1 to 9 backup is run on an EMC IP4700 filer within five minutes of creating a file, more files than expected may be saved. For example, if a level 1 backup is run, followed by a level 2 backup, and both of these backups complete within five minutes of the file being created, the newly created file might appear on both the level 1 and level 2 backups, even though the files should only be added to the level 1 backup. To avoid this problem, wait at least five minutes after creating a file to run a backup.

Bus reset can rewind tape on Microsoft Windows

Tape devices shared by more than one computer can experience unpredictable bus resets from any of the computers. These reset commands can cause a tape on a shared bus (such as SCSI or Fibre Channel) to rewind. The results can include:

- Tapes that are prematurely treated as full.
- Corrupted data on tapes.

System configurations that do not properly protect tape devices shared by more than one computer can experience these bus resets. Some switching hardware can be configured to protect tape devices from resets. Certain operating systems include built-in protection (that can be turned on by the user) against stray bus resets.

To determine whether the switch or operating system includes such protection, and to learn how to use it, refer to the manufacturer's documentation or contact the manufacturer.

Note: Whatever solution you select *must* block the reset command from the tape drives, but must *not* block it from certain cluster-controlled disks. The reset is a necessary part of the disk arbitration process in some cluster environments. To determine whether this applies in your environment, refer to the cluster documentation.

The NetWorker software does *not* support configuring a tape device in a shared SCSI or Fibre Channel environment without using either a hardware switch or an appropriate operating system solution to handle the bus reset issue.

Microsoft does not support attaching any tape drive to any shared SCSI bus that also hosts cluster-controlled disks because of this issue.

Older versions of Intel unsupported on NetWorker software on Linux

To take advantage of IA-32 586 and 686 optimizations in the compiler, as well as the new instructions provided on these architectures, the NetWorker release 7.6 for Linux does not support older versions of Intel, such as 486.

Note: NetWorker release 6.1.*x* for Linux fully supports older versions of Intel architecture, including 386 and 486.

NetWorker features that are unsupported for Windows NT 4.0, Windows 2000, and Windows Server 2003

These NetWorker features are unsupported on Windows:

- Directed recovery of Encrypting File Systems (EFS)
- Directed recovery of SYSTEM or VSS SYSTEM save sets
- Verified (**-V**) backup of the EFS
- Verified (**-V**) backup of SYSTEM or VSS SYSTEM save sets
- Archiving of SYSTEM or VSS SYSTEM save sets

Considerations when using an advanced file type device

The AFTD device can be deployed in varying environments with local disks, NFS and CIFS mounted/mapped disks. Operation of this feature is affected by the configuration. Ensure that the AFTD is fully operational in the production environment before you deploy it as part of regularly scheduled operations.

As part of the validation process, include these tests:

- Backup
- Recover
- Staging
- Cloning
- Maximum file-size compatibility between the operating system and a disk device
- Device behavior when the disk is full

Some versions of NFS or CIFS drop data blocks when a file system becomes full. Use versions of NFS, CIFS, and operating systems that fully interoperate and handle a full file system in a robust manner.

On some disk devices, the volume labelling process may take longer than expected. This extended labelling time depends on the type of disk device being used and does not indicate a limitation of the NetWorker software.

The upper limits of save set size depend on the upper limits supported by the operating system or the file size specified by the disk device vendor.

Configuration options to send write error alert if NFS mount of AFTD device fails silently while writing to AFTD

It is possible for the NFS mount of an AFTD device to fail silently during large writes to the AFTD, which can result in write operations in progress continuing on the underlying mount point in the local file system. To prevent this from occurring, use one of the following configurations which will send a write error at the point in time when the NFS mount fails:

- Ensure the local mount point permissions do not have local write permissions.
- Use the **overlay** mount option for operating systems that support this option (for example, **-O** on Solaris), so the local file system mount point is considered read-only.
- Create a sub-directory structure for the AFTD below the top-level mounted directory. This will result in the path becoming invalid if the NFS mount fails, producing a write error.

Disable a driver before configuring an a media library if the driver was automatically installed on Microsoft Windows 2000 or Server 2003

On a Windows 2000 or Server 2003 operating system, if a driver is automatically installed for a media library, first disable the driver before configuring a media library using the NetWorker software.

This does not apply to media library configured as RSM autochangers. Media libraries configured as RSM works with media library driver enabled.

Enabling NetWare 4.22 clients on Windows

Support for a NetWare client is controlled by the environment variable **NSR_SUPPORT_NetWare_4X**. By default, the supported is disabled. To enable support for NetWare clients set the server system environment variable **NSR_SUPPORT_NetWare_4X** to **1**:

1. Open **Control Panel** and select **System**.
2. In **System Properties** attribute, select the **Advanced** tab.
3. Select the **Environment Variables** option. A new window will appear called **System Variables**.
4. Click **New**.
   a. Type **NSR_SUPPORT_NetWare_4X** for the **Variable** Name.
   b. Type **1** for the **Variable Value**.
5. Reboot the computer.
6. Open a command prompt window and type this command:

```
set NSR_SUPPORT_NetWare_4X=1
```

When NetWare support is enabled and a NetWare client establishes connection with the **nsrd** process, a message indicating "Support for NetWare clients is enabled" appears in the daemon log file

IMPORTANT

Authentication methods in the NetWorker 7.3.2 and later server have been changed to provide greater security. The 4.x client is no longer fully compatible with this version of the server. Upgrade to the 7.2.1 NetWorker client for NetWare. For NetWare 5.1 systems, apply LGTpa86701. Netware 5.0 and older systems are not compatible with the NetWorker 7.2.1 client for NetWare.

Manual backups from the client interface using the NetWare Console can be successfully completed. Note that manual backups will only use media from the default pool.

Adjusting client parallelism to decrease VSS backup failures on Microsoft Windows

If VSS is licensed and enabled and timeout failures occur when backing up save sets, try decreasing the value of the client Parallelism setting.

During a VSS backup, a snapshot is taken of each specified save set. The client Parallelism setting determines how many snapshots are taken concurrently. Since snapshots consume system resources, the more snapshots that are taken concurrently, the more likely it is that a snapshot will fail.

After a failed attempt, NetWorker software waits ten minutes before attempting another snapshot, as recommended by Microsoft. After three unsuccessful snapshot attempts, the backup of the save set fails.

When backing up a large number of save sets, decreasing the value of the client Parallelism helps to ensure successful snapshots.

Using the NSR_NDMP_RESTORE_LIMIT environment variable on Microsoft Windows

The **NSR_NDMP_RESTORE_LIMIT** environment variable is used to limit memory consumption during recoveries involving a large number of index entries (millions). This is specifically useful if there is not enough swap space or memory for the number of index entries selected for the recovery. If the variable is not set, the recovery might fail with an "out of memory" error message.

To avoid a failure:

1. In the NetWorker startup script, set the **NSR_NDMP_RESTORE_LIMIT** environment variable to an appropriate value.
2. The value of the **NSR_NDMP_RESTORE_LIMIT** environment variable determines the maximum number of entries that the **recover** program can allocate memory to. For example, if the total number of entries is 3 million, then the **NSR_NDMP_RESTORE_LIMIT** can be set to 50,000 or 1,000,000, but less than 3,000,000.
3. In the **NetWorker Administration** window, select **Recover**.
4. Select the files to recover, and click **OK**.

The recovery is divided into multiple recoveries, where each has the **NSR_NDMP_RESTORE_LIMIT** entries successfully recovered in their respective sessions.

Manually removing data left behind from a partial uninstall of NetWorker software on Microsoft Windows

When performing a partial uninstall of the NetWorker software by using the **Add/Remove** Programs option in the Windows Control Panel, if **Change** is selected, certain folders, files, and registry keys remain on the system. This occurs when the **Remove NetWorker Metadata** checkbox was left unselected.

To remove this data:

1. Open Windows Explorer, and delete **%SystemDrive%\Program Files\EMC NetWorker\nsr**.
2. Open the Windows Registry Editor, and delete *<\\HKEY_CURRENT_USER\Software\EMC NetWorker>*.

If **Remove** is selected, the checkbox will not appear and a partial uninstall is performed.

Client retries setting with VMware Consolidated Backups

When using NetWorker software with VMware Consolidated Backups (VCB), the Client Retries attribute for Group resources should be set to 0. If Client Retries is set to any value higher than 0 and the backup fails, the NetWorker software will retry the backup regardless of the state of the VCB backup itself. This can result in the VMware utility generating errors such as "mount point already exists" or "backup snapshot already exists."

Change to save set expiration time

When a save set reaches its scheduled browse or retention policy deadline (the day when the save set expires or becomes no longer browsable), the time of expiration on that day is 23:59:59 (11:59:59 P.M.). For NetWorker releases 7.2.x and earlier, the time of expiration for the save set matches the time of day the save set was originally created.

For example, if a save set was backed up on May 1, 2005 at 1:00 P.M. and the browse or retention policy is set to 5 years, with NetWorker releases 7.2.x and earlier, the save set would have expired on May 1, 2010 at 1:00 P.M. With NetWorker releases 7.3.x and later, the save set will expire on May 1, 2010 at 11:59:59 P.M.

Documentation

This section describes the documentation for the following NetWorker releases:

- "NetWorker product documentation" on page 212
- "NetWorker related documentation" on page 213
- "Documentation corrections and additions" on page 214

NetWorker product documentation

This section describes the additional documentation and information products that are available with NetWorker.

EMC NetWorker Installation Guide

Provides instructions for installing or updating the NetWorker software for clients, console and server on all supported platforms.

EMC NetWorker Cluster Installation Guide

Contains information related to installation of the NetWorker software on cluster server and clients.

EMC NetWorker Administration Guide

Describes how configure and maintain the NetWorker software.

EMC NetWorker Release Notes

Contains information on new features and changes, fixed problems, known limitations, environment and system requirements for the latest NetWorker software release.

EMC NetWorker Licensing Guide

Provides information about licensing NetWorker products and features.

NetWorker Error Message Guide

Provides information on common NetWorker error messages.

NetWorker Performance Optimization Planning Guide

Contains basic performance planning, tuning, and optimization information for NetWorker environments.

NetWorker Command Reference Guide

Provides reference information for NetWorker commands and options.

NetWorker Management Console Online Help

Describes the day-to-day administration tasks performed in the NetWorker Management Console and the NetWorker Administration window. To view Help, click **Help** in the main menu.

NetWorker Avamar Integration Guide

Provides planning and configuration information on the use of Avamar deduplication nodes within an integrated NetWorker backup and storage management environment.

NetWorker Cloning Integration Guide

Provides planning, practices, and configuration information for using the NetWorker, NMM, and NMDA cloning feature

NetWorker Data Domain Deduplication Devices Integration Guide

Provides planning and configuration information on the use of Data Domain devices for data deduplication backup and storage in a NetWorker environment.

NetWorker VMware Integration Guide

Provides planning and configuration information on the use of VMware within a NetWorker backup and storage management environment.

NetWorker User Online Help

The NetWorker User program is the Windows client interface. Describes how to use the NetWorker User program which is the Windows client interface connect to a NetWorker server to back up, recover, archive, and retrieve files over a network.

NetWorker related documentation

For more information about NetWorker software, refer to this documentation:

EMC NetWorker Software Compatibility Guide

A list of supported client, server, and storage node operating systems for the following software products: AlphaStor, ArchiveXtender, DiskXtender for Unix/Linux, DiskXtender for Windows, Backup Advisor, AutoStart, AutoStart SE, RepliStor, NetWorker, and NetWorker Modules and Options.

NetWorker Procedure Generator

The NetWorker Procedure Generator (NPG) is a stand-alone Windows application used to generate precise user driven steps for tasks such as installation, upgrading, migrating, and disaster recovery, carried out by customers, Support and the field. With the NPG,

each procedure is tailored and generated based on user-selectable prompts. This generated procedure gathers the most critical parts of NetWorker product guides and combines experts' advice into a single document with a standardized format.

Technical Notes and White Papers

Provides an in-depth technical perspective of a product or products as applied to critical business issues or requirements. Technical Notes and White paper types include technology and business considerations, applied technologies, detailed reviews, and best practices planning.

Documentation corrections and additions

The following section provides information on updates to the core NetWorker documentation set that currently do not appear in those guides.

NetWorker Administration Guide

Changes to behavior of backing up BOOT/BCD Data on Windows 2008 R2 and Windows 7

The *NetWorker 8.0 SP1 Administration Guide* indicates in the section "Backing up BOOT/BCD Data on Windows 2008R2 and Windows 7" on page 119 that NetWorker ensures that the partition containing the BCD is mounted on these operating systems and then assigns a drive letter to the mounted partition. However, starting in NetWorker release 8.0 SP1, this behavior has changed. NetWorker no longer mounts the BCD. Also, the save set name has changed to GLOBALROOT/*savesetname*.

NetWorker Cluster Installation Guide

Support for highly available NMC server reviewed by request only

The *NetWorker 8.0 SP1 Cluster Installation Guide* currently provides information on configuring a highly available (HA) NMC server. However, support for a highly available NMC server is reviewed by request only. Please contact EMC sales to initiate a Request for Product Qualification (RPQ).

Installation

This section provides information on installing and updating the NetWorker software. More information on installation and updating procedures is provided in the *EMC NetWorker Release 8.0 Installation Guide*:

- "NetWorker client location and space requirements" on page 215
- "Installing ConnectEMC" on page 216
- "VMware tools required when performing backups on VM" on page 216
- "Update enablers automated when license expires" on page 216
- "Java not included with the NetWorker software" on page 217
- "Installing the NetWorker client in a failover zone" on page 217

- “Reconfiguring Console authentication for LDAP if NMC fails to start after update” on page 217

NetWorker client location and space requirements

This section specifies the location and space requirements for the NetWorker client software for NetWorker release 8.0.

Microsoft Windows

Table 22 on page 215 specifies the location and space requirements for the NetWorker client software in a Microsoft Windows environment.

Table 22 Microsoft Windows location and space requirements

NetWorker files	Location	Space		
		x86	x64	ia64
NetWorker client files and NetWorker catalog	EMC NetWorker\nsr\	110 MB	110 MB	110 MB
EMC HomeBase Agent binary	EMC NetWorker\ HomebBaseAgent\	400 MB	400 MB	Not applicable
Temporary space required for EMC HomeBase Agent	%TEMP%	400 MB	400 MB	Not applicable

Linux

Table 23 on page 215 specifies the location and space requirements for the NetWorker client software in a Linux environment.

Table 23 Linux location and space requirements

NetWorker files	Location	Space		
		x86	x64	ia64
NetWorker client files and NetWorker catalog	/usr/bin /usr/sbin /usr/lib/nsr /opt/nsr	110 MB	110 MB	110 MB
EMC HomeBase Agent binary	/opt/homebase-agent/	400 MB	400 MB	not applicable
Temporary space required for EMC HomeBase Agent	/tmp	400 MB	400 MB	not applicable

Solaris location and space requirements

Table 24 on page 216 specifies the location and space requirements for the NetWorker client software in a Solaris environment.

Table 24 Solaris location and space requirements

NetWorker files	Location	Space		
		Sparc	x86	amd64
NetWorker client files and NetWorker catalog	/usr/bin /usr/sbin /usr/lib/nsr /opt/nsr	200 MB	200 MB	200 MB
EMC HomeBase Agent binary	/opt/homebase-agent/	440 MB	not applicable	not applicable
Temporary space required for EMC HomeBase Agent	/tmp	440 MB	not applicable	not applicable

Installing ConnectEMC

When performing a new installation of the NetWorker software, a prompt to install ConnectEMC displays after you select the installation type (either server, client, or server and client). ConnectEMC is a program that generates an .xml file once per month from information in the RAP database (such as data related to system configuration and server errors), and sends the file to EMC Corporate Customer Service for the purpose of analyzing the customer's NetWorker configuration if a failure occurs.

If installing ConnectEMC, the minimum installation must be client and it must be installed on a system running Windows 32-bit (x86). More information on installing ConnectEMC and best practices for installing is provided in the *EMC NetWorker Release 8.0 Installation Guide*.

Installing ConnectEMC when updating the software

The ConnectEMC prompt does not appear if you are updating the NetWorker software. If you are updating a client to NetWorker release 8.0 from a previous release and you want to install ConnectEMC, you must uninstall then reinstall on the client.

VMware tools required when performing backups on VM

When performing backup operations on a VM, VMware tools must be installed in order for the backups to complete.

Update enablers automated when license expires

At the completion of a successful installation, when the NetWorker server starts, a check occurs to determine whether an Update enabler is required. If an Update enabler is required, the enabler is added automatically.

After the update enabler is added, the NetWorker server generates an alert and displays the alert in NMC (and in nsrwatch) to notify that this enabler needs to be authorized within 45 days.

Note: If you are upgrading from a 7.5.x release to 7.6, an update enabler is not generated and not required. If you are upgrading from any release previous to 7.5 to release 7.6, the update enabler is auto-generated. However, the enabler indicates "Update enabler for 7.5" and will need to be authorized for a 7.6 server within 45 days.

Java not included with the NetWorker software

Java is not included with the NetWorker install. When installing the Console server software, a minimum JRE version of 1.6 is required, depending on the operating system. Java is required to run the Console GUI, but is optional for the NMC server.

If you do not have the required Java version installed, go to the Java website to download and install the appropriate JRE version. The NMC console cannot be started until the appropriate JRE version is installed.

Installing the NetWorker client in a failover zone

The NetWorker software supports installation of the NetWorker client in a failover zone. More information on failover zone setup is provided in the Sun Cluster Data Service for Solaris Containers Guide, available at:

http://dlc.sun.com/pdf/819-3069/819-3069.pdf

Note: A NetWorker server or storage node cannot be installed in a failover zone. Also, an active/active configuration is not supported.

To make the NetWorker client highly available, use the following steps:

1. After the zone has been set up as a failover zone with the SUNWsczone tool **sczbt**, install the NetWorker Client.
2. When setting up the **sczsh_config** configuration file, ensure the following parameters are specified with these values:

```
"ServiceStartCommand="/etc/init.d/networker start"
"ServiceStopCommand="/usr/sbin/nsr_shutdown"
"ServiceProbeCommand="/usr/sbin/nsrzoneprobe"
```

3. Run **sczsh_register** to register.

Note: You must have Solaris 10 or later installed to use any zone functionality, and the SUN cluster must be installed in order to use the failover functionality.

Reconfiguring Console authentication for LDAP if NMC fails to start after update

If a NetWorker 7.5.x Console server is configured to use LDAP for authentication and you are updating to release 8.0, in some cases NMC may fail to start after the update. If this occurs, the **gstd.raw** file in the Console's logs directory contains the message "acm: External directory library initialization failed".

Workaround

Reset the Console authentication configuration and reconfigure LDAP by performing the following steps:

1. Ensure that the **gstd** service is not running. If **gstd** is running, stop the service.

2. Go to *‹NMC install directory›*/**cst**.
3. Delete the files **Config.xml**, **csp.clb**, **csp.clb.bak** and **upgrade_cst.tag**, if present.
4. Copy **Config.xml.template** to **Config.xml**.
5. Start the Console.

   The Console starts in native authentication mode.
6. Log in as Console's 'administrator' user with the password that was last set for this user before switching to LDAP mode.
7. Go to **Setup › Configure Login Authentication** and configure LDAP again.

Troubleshooting and getting help

EMC support, product, and licensing information can be obtained as follows.

Product information — For documentation, release notes, software updates, or for information about EMC products, licensing, and service, go to the EMC Online Support website (registration required) at:

https://support.emc.com/

Technical support — For technical support, go to EMC Customer Service on the EMC Online Support website. To open a service request through the EMC Online Support website, you must have a valid support agreement. Please contact your EMC sales representative for details about obtaining a valid support agreement or to answer any questions about your account.

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